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Original Articles.

THE NATURE OF PROSTATIC HYPERTROPHY.

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In the introduction of this paper the writers wish to state that there is no expectation on their part that they will be able to settle definitely at once all the questions concerning the nature of prostatic hypertrophy. Their object is to place on record a somewhat exhaustive report of the histologic examination of a considerable number of prostates, to mention the results of some clinical experience and to present the conclusions to which the data have directed them. An exhaustive consideration of the theories and data of other observers must, on account of lack of space, be omitted. By confining ourselves to a consideration of the conclusions of observations made during the past five years by those who have had a large amount of material at their command and eliminating those whose conclusions have been made from theoretical considerations, the field to be looked over can be made narrow. From early times until the microscope came into general use the prostatic hypertrophy of the aged was by many considered of inflammatory origin, often thought to have been caused by a preceding urethritis. But for the past twenty years, while the theories as to its nature have been varied, there seems to have been a pretty general consensus of opinion that a true tumor formation of some sort or other was present in the prostatic hypertrophy of the aged and that the prostatitis associated with urethritis found in young men was another affair.

Gouley, who did the earliest serious work on the prostate in this country, claimed that in necropsies of young men suffering from prostatitis who died from intercurrent affections he found conditions apparently resembling those found in the prostatic hypertrophy of the aged. He suggested but did not assert an inflammatory origin in this condition. In his latest publication he considers that inflammation is the cause in some cases but adenoma in others.

The senior author of this article in a paper and discussion[1] calling attention to the frequency of prostatitis as a complication of urethritis from an examination of 216 cases, stated his belief from clinical observation that the hypertrophied prostate of the aged followed prostatitis and again later in a paper read before the Academy, but not published, expressed the same views, giving a list of men who had believed the same thing from clinical observations before the microscope came so generally into play. His views were received at the time with a lack of approval that was, to say the least, discouraging.

At the present time so many observers have noticed the very frequent connection between urethritis and prostatitis that the former may be considered as an etiological factor. Two questions which arise are: what evidence can be brought out at the present time from histologic findings that the nature of prostatic hypertrophy differs to any extent from that found in the past and what new relations, if any, can be shown to exist between posterior urethritis, prostatitis and hypertrophied prostates? Until very recently pathologists almost universally considered prostatic hypertrophy of the aged to be due to true tumor formation and while they differed among themselves as to the nature of these tumors a good many of them thought the tumors consisted of an increase in the amount of glandular tissue, which would be an adenoma; in the muscular tissue, therefore, a myoma; or in the fibrous tissue, a fibroma; or that there existed more or less of a mixture of these three forms.

Referring to important researches published during the past five years, those of Motz, Albarran, Halle and Ciencanowski seem to have been the most deserving of attention. The writers of this article gave the results of some of their observations on the prostate last June in a paper entitled "Fallacies in the Treatment of Urethral Diseases," read before the annual meeting of the American Medical Association in St. Paul.[2] Motz, whose article was the earliest published, arrived at his conclusions from the examination of thirty hypertrophied prostates and his conclusions seem to show that the vast majority of enlargements were of the adenomatous type, that the remaining enlargements were due to a mixture of the glandular and fibrous forms and that the purely fibrous were of a very great rarity. His researches tended to demonstrate that there was no ground for the views held by those who have considered that the changes in the blood vessels played an important part.

Prof. Dr. Stanislaus Ciencanowski[3] reported a most exhaustive study on a large number of hypertrophied prostates as well as studies on the pathology of the bladder and of the kidneys. Whether or not one agrees with the conclusions he reached, every one must agree in praising the exhaustive research, both histologic and

1. Some Observations on the Prostate. Journal of Cutaneous and Genito-Urinary Diseases. Read before the American Genito-Urinary Association in 1898.

2. JOUR. A. M. A., Nov. 9, 1901, p. 1223.

3. Anatomische Untersuchungen ueber die Sogenannte Prostata Hypertrophica und Verwandte Prozesse. Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie, Jena, 1900. (Published originally in the Polish in 1896.)

historical, and give him credit for the excellent plates published illustrating his article. As an indication of the thoroughness of his work it may be stated that the bibliography to which he refers comprises some five hundred names. Briefly stated, Ciencanowski's conclusions were that prostatic hypertrophy was an inflammatory affair, the inflammation extending from the posterior urethra and he suggested blenorrhagia as a probable cause.

Albarran and Halle followed Ciencanowski by making a most painstaking and exhaustive research of prostatic hypertrophy.[4] Their conclusions were reached from the examination of 100 prostates, which were obtained from men who died from some of the complications of what is generally termed prostatism. Their conclusions—as regards the preponderance of the glandular or adenomal form over that of the myomatous or fibro-myomatous—agree with Motz, whose conclusions were reached after an examination of thirty hypertrophied prostates. They mention Ciencanowski's work, but criticise it by saying that the prostates from which Ciencanowski drew his conclusions were those of young men. While they mention hypertrophied prostate as being due to adenoma or fibro-myoma, using the old terms, so to speak, they do not by any means reject the theory of its being the result of inflammation and while they mention the two different grounds of belief, judging from their language, they seem to lean more towards the latter. It may be interesting here to note that out of the hundred cases they only found one of what they called the purely fibrous form and what has probably been called in the past the purely myomatous form. The conclusion on which Albarran and Halle dwell most emphatically is that in fourteen cases they found a condition which they termed adeno-carcinoma. In other words, they claim that cancer was present in these fourteen cases. They give a history of the cases. Upon reading the histories, two clinical facts seem to stand out prominently in opposition to their theory that those fourteen cases were cancer. One of these facts is that in but one case was there any mention of metastasis. The other is that the clinical histories of most of those cases show that the patients had suffered from their prostatic trouble for many years. Albarran and Halle claim that these are a sort of a tumor midway between the ordinary hypertrophy of old age and true cancer. They make the interesting statement that when a patient who has suffered the discomfort of a hypertrophied prostate for a long time suddenly develops cachexia and dies within a few months without other clinical evidence to account for it, cancer of the prostate is probably present.

While the writers of this paper can hardly agree with the conclusions reached by Albarran and Halle as to the frequency of cancer of the prostate from their histologic findings, as our plates show similar appearances in certain specimens to those shown in their plates and called cancer by them, which we do not consider such, yet we think that surgeons should be grateful to them for directing thought in that direction. Several other cases whose history they give were undoubtedly cancer of the prostate. They leave the impression on our minds that cancer of the prostate is probably more frequent than has been generally supposed and may be held accountable occasionally for cancers in other parts of the body occurring without any history of prolonged irritation. Some such cancers, therefore, which have been considered primary, may after all be secondary in character.

Regarding the question as to the connection between prostatitis as it presents itself as a complication of urethritis and true prostatic hypertrophy of the aged, it may be interesting to quote here the latest views of Ciencanowski[5]: "To recapitulate, the histologic aspect of all the senile hypertrophies I have studied correspond in many regards to those upon which Mr. Fenger has written apropos of chronic prostatitis of gonorrheal origin. There exists, however, this important difference, that the alterations of the stroma of which I write are much less pronounced in the cases of senile hypertrophy of the prostate and produce the impression of a chronic inflammation of extremely slow evolution." Right here it may be well to examine an argument against the idea that hypertrophied prostate may be of inflammatory origin, which has been brought up in Europe and in St. Paul last June, and that is that any inflammatory processes found in true prostatic hypertrophy are the result of an accidental inflammatory complication such as might come from the improper passage of instruments or the remains of an ancient chronic prostatitis. It may be here stated briefly that one of the main arguments against such a supposition is the fact noticed by Ciencanowski in all his cases that the same appearance was found in all the cases of prostatic hypertrophy examined whether there was any history of the passage of sounds or not. Ciencanowski's reply to the criticisms of Albarran and Halle shows that his cases of hypertrophied prostate were those of old men, some of whom had shown symptoms of prostatism during life and some not, but the same conditions were present in both; and then, again, Ciencanowski, whose views have been confirmed by us, has been able to show the direct connection between the alterations observed, and secondly, the origin of the senile hypertrophy of the prostate.

To quote again from Ciencanowski, "Hypertrophy senile of the prostate has nothing to do with a neoplastic process. The essential cause of this phenomenon lies in chronic inflammation of extremely slow evolution, localizing itself in the glandular tissue, or in the stroma, or in both and resulting in this inflammatory process which resembles from a histologic point of view chronic post-blenorrhagic inflammations and depends in its intensity on its extent and above all on its localization. The appearance of the hypertrophy is much more pronounced if the periglandular inflammation of the stroma is most evident in the center than it is if the interglandular inflammation localizes itself at the periphery of the prostate. The inverse disposition of these lesions does not cause any hypertrophy of the glands and may even cause atrophy." The slow progress of the inflammation we would expect from our knowledge of the slow progress of chronic inflammation in the urethra generally and it should also be borne in mind here that the clinical experience of many men for decades past has led them to believe that hypertrophy of the prostate was of gonorrheal origin, although the clinical experience of some others has led them to dispute it. One argument against the theory that urethritis plays a part in causing prostatic hypertrophy is that in India, where urethritis is common, prostatic hypertrophy is unknown or very rare. An examination of India medical journals and health reports does not seem to bear this out.

4. Hypertrophie et Neoplasies Epitheliales de la Prostate. Par M. M. J. Albarran et N. Halle, Ann. des Mal. des Org. Urin., Tome xviii, 1900.

5. Annual de Malad. des organs Genito-Urinar., 1901, "Quelques Apercus sur le Prostatisme."

To recapitulate briefly, the results of the work done on the nature of prostatic hypertrophy during the last five years by observers who have had the opportunity of forming their conclusions from the observation of a large number of prostates amount to about this:

1. That any former belief that prostatic hypertrophy was due to atheromatous conditions of the blood vessels is erroneous.

2. That the purely myomatous or fibrous form of prostatic hypertrophy is extremely rare, as is being shown by unanimous conclusions, resulting from investigation, by Motz, Albarran and Halle and Ciencanowski.

3. Motz, Albarran and Halle consider that proliferation of the cells of the glandular portion of the prostate, either alone or mingled with changes in the stroma, play the most important part in the hypertrophy of the gland.

4. Albarran and Halle do not dispute the fact that a chronic inflammatory process furnishes the phenomena presented, but lay special consideration on conditions found histologically in a large portion of the prostates examined by them, fourteen out of a hundred, and which they consider are either cancer in the prostate or a sort of a product midway between inflammatory and cancerous tissue.

5. Ciencanowski in his very exhaustive studies of the prostate considers hypertrophy the result of a chronic inflammation of the organ, the original seat of which can always be found if searched for long enough by means of a large number of sections. According as the original focus of the inflammation is in the periphery or in the center of the organ a corresponding form of prostatic hypertrophy or atrophy will be present.

Following is a description of the histologic work done by us on the subject. The exact number of prostates, including normal ones, that have been examined and from which the selection was made on which our conclusions are founded, it is not possible for us to state. The junior author of this paper has for six years been examining all the prostates that a large amount of necropsical work permitted him to obtain. The number would probably run into the hundreds. A hundred or over were collected, including normal ones, for the purposes of the paper read in St. Paul last June. From the total number of prostates which the writers of this paper have been able to gather, a selection was made of all those which showed marked enlargement, in other words, which were apparently abnormal prostates, whether we were able to obtain any history of the cases or not. These enlarged prostates were fifty-eight in number. We consider that they can properly be termed hypertrophied prostates from the fact that under the microscope the same or similar conditions were present in them all, whether they had been removed and we had the history of the case, or whether they were some specimen, of whose history we know nothing. We either have or are able to obtain the history of 19 of the 58.

Six of these have been removed at operation. We believe that in so large a series, selected conscientiously without regard to anything except the presence of tissue augmentation, we have included all usual varieties of prostatic hypertrophy. This condition being most frequent in the aged, we assume that the majority of our specimens have been taken from old men. The process which we have found has been of the same nature in all the cases, the difference being entirely quantitative or of degree. For this reason we state with confidence that our studies have been based on all true types of prostatic hypertrophy. The tissue removed for examination was always selected from that portion of the gland which showed the greatest hypertrophy. Several sections were taken from a single gland, wherever from the gross appearance of the tissue considerable variation in structure was expected. The notes recorded on each specimen have been as brief as possible, only points directly bearing on the problem under consideration have been touched. No attempt has been made to sub-classify or exhaustively describe the various types of prostatic hypertrophy. The entire study has been made with the idea of detecting the cause of this common condition.

We wish to express our thanks to Dr. B. Lapowski for having first called our attention to the extremely interesting work of Ciencanowski; to Dr. John T. McGowan, who handed to us for the purpose of the paper last spring a collection of some sixty prostates which he had gathered and on which he was carrying on some histologic investigations in connection with Dr. Smith; to Drs. Howard Lilienthal, Frank Hartley, Henry Morton, Raymond Guiteras, Chas. Phelps and George Stewart, each for a prostate which they had removed by operation. Through the kindness of Dr. Charles Peck, six specimens were obtained from the Museum of the New York Hospital, some if not all of which we understand had been removed at operation, about which we have not yet had time to obtain the histories. The Museum of the Carnegie Laboratory, the morgue and various other sources supplied other specimens.

HISTOLOGICAL REPORT.

CASE 1.—N. Y. H., No. 3876. Great chronic interstitial increase with obliteration of acini in places, and marked atrophy of muscle fibers. Patches of round-cell infiltration about the acini and particularly in the neighborhood of vessels. In some places structure seems about normal, but acini are generally small and corpora amylacea few. The interstitial increase and obliteration of acini are most marked in the peripheral portions.

CASE 2.—N. Y. H., No. 2121. Acini in central portions are cystic, filled by cells and detritus. Corpora amylacea are fairly numerous. There is generally a considerable increase in the amount of connective tissue with a corresponding decrease in the muscle cells. There are a few areas of small round-cell infiltration about the periphery and occasionally about some of the central acini, but inflammation is mostly represented by the chronic connective tissue hyperplasia.

CASE 3.—N. Y. H., No. 2431. In general the tissue is normal, but in one portion there is intense round cell infiltration which has produced partial necrosis and has infiltrated deeply into the substance of the gland. Acute connective tissue hyperplasia is apparent about these areas, but the remaining portions of the gland are otherwise natural.

CASE 4.—N. Y. H., No. 6446. Moderate distension of acini, some of which are completely filled with detritus and epithelial cells. Considerable round-cell infiltration about some of the acini, particularly in the central parts of the section. In these areas there is an increase in the connective tissue stroma, with a compensatory relative decrease in muscle. Elsewhere the relative amounts of muscle and stroma are normal. Corpora amylacea are few and small.

CASE 5.—N. Y. H., No. 5265. General stroma much increased, particularly about certain acini and ducts where the hyperplastic tissue is in the adult form. Still other acini are surrounded by zones of small round-cell infiltration, in parts of which injection of vessels and true acute inflammatory changes are made out. Corpora amylacea are infrequent, though some of the acini are much dilated.

CASE 6.—N. Y. H., No. 4877. Great enlargement of glandular acini, so that appearance is of large cysts, lined by a layer of usually simple columnar epithelium and filled by detritus, cells and small corpora amylacea. The connective tissue about these dilated acini is increased and occasionally karyokinetic figures are found in the connective tissue cells. Small areas

of small round-cell infiltration are present, particularly about some of the acini. The muscle cells in places have been replaced by hyperplastic connective tissue. The blood vessels are not congested, and show but a very moderate degree of atheroma. Some are surrounded by an adventitia which is more or less infiltrated with small round cells. Apparently, some edema of the tissues is present. This specimen represents what would ordinarily be called a cystic adenoma of the prostate.

CASE 7.—Greatly enlarged middle lobe from specimen in Carnegie Laboratory Museum. The peripheral portions of the gland show a thickening of the connective tissue, particularly about the vessels, where frequent areas of round cell infiltration are also found. Muscle cells have been largely replaced in these areas and the glandular acini and ducts have been compressed by interstitial hyperplasia. The central portions of the middle lobe are made up of much dilated acini, which are mostly filled by epithelial cells, many of which are breaking down. Small round-cell infiltrations are frequent about these acini and connective tissue increase is marked. The blood vessels show slight atheroma. Corpora amylacea are infrequent.

CASE 8.—Museum specimen from Carnegie Laboratory. Great enlargement of the middle lobe. Considerable increase in connective tissue, numerous large fibroblastic cells, moderate small round cell infiltration in patches about vessels. The central acini are much dilated and are filled by broken-down cells and cell detritus. Occasional small corpora amylacea are present in these cystic acini. The blood vessels show slight arteriosclerosis.

CASE 9.—From Museum Carnegie Laboratory. Great middle lobe hypertrophy. Some of the acini are small, being compressed as a result of hyperplasia of the surrounding connective tissue, but most of the acini are enlarged and filled by one or more corpora amylacea, several of which are extremely large. In the immediate neighborhood of such acini muscle tissue has been replaced by fibrous tissue of adult form. Nearly all the acini contain such large bodies. The blood vessels show moderate arteriosclerosis.

CASE 10.—From Museum Carnegie Laboratory. Great hypertrophy of the middle lobe. Quite extensive perivascular connective tissue increase. The acini are widely separated and there is a general connective tissue hyperplasia apparently of perivascular origin. Patches of small round cell infiltration are frequent. The acini are centrally situated, usually widely distended and filled by cell detritus, polygonal epithelial cells and small corpora amylacea.

CASE 11.—Museum Carnegie Laboratory. Hypertrophy of middle lobe. Marked increase of adult connective tissue. The acini are represented by small openings and are compressed by the hyperplastic connective tissue about them. The vessels show marked arteriosclerosis. Such acini are usually filled by polygonal epithelial cells and small corpora amylacea. The interstitial hyperplasia has also resulted in muscular atrophy.

CASE 12.—Museum Carnegie Laboratory. Greatest enlargement in middle lobe. Well-marked connective tissue increase in peripheral portions of gland, showing both old and recent changes. Peripheral acini almost completely obliterated by overgrowth of connective tissue. Central acini distended somewhat and contain cells, detritus and small corpora amylacea. Patches of small round-cell infiltration frequent. Moderate arteriosclerosis.

CASE 13.—Prostate enlarged about one-third, from a man of 53 years. Morgue. Most portions of the gland are normal, but occasional patches of cell infiltration are found, particularly about certain acini which are over distended and contain epithelial cells, the central portions of which have broken down into amorphous material grouped as though forming corpora amylacea. Occasional acini are surrounded by hyperplastic connective tissue which has stenosed their ducts. This is particularly frequent in the peripheral portions of the section. The vessels are mostly congested and show but slight atheroma. The muscle has in some areas been more or less displaced by the hyperplastic connective tissue.

CASE 14.—From morgue. Subject aged 63. Enlarged about one-fourth. Marked adult connective tissue increase extending in from periphery where acini are almost completely obliterated and where round cell infiltration is almost general. The central acini are cystic, contain detritus, epithelial cells and small corpora amylacea. The walls between these distended acini are much thinned and are almost wholly fibrous. Some of the larger acini contain very numerous corpora amylacea. The vessels show a moderate degree of atheroma.

CASE 15.—Morgue. Quite general interstitial hyperplasia with the result that nearly all parts of the gland show collapsed acini, surrounded by hypertrophied connective tissue. In some places there is considerable inflammatory infiltration, but in other areas this is wanting. Connective tissue hyperplasia in this section seems mostly limited to the periacinous tissue. Corpora amylacea are infrequent and small. The vessels show very little change.

CASE 16.—Morgue. Section is from periphery of gland. Vessels show marked atheroma, one shows endarteritis obliterans. Few acini in section. Considerable connective tissue hyperplasia, displacing much of the muscle tissue and obliterating the glands. No acute inflammatory exudate.

CASE 17.—Morgue. Tissue generally normal. Slight interstitial increase about certain distended acini. The vessels show no abnormality.

CASE 18.—General hypertrophy. From morgue. No inflammatory patches. A few areas in which perhaps there is slight increase in the connective tissue. The acini are not small, but are filled by cells and contain moderate quantities of detritus. Corpora amylacea are infrequent and are mostly small, though a few are found which nearly fill the acini. One border of section shows, however, a quite intense small round cell infiltration, with connective tissue proliferating about it—apparently this is a recent process.

CASE 19.—Morgue. Enlarged one-fourth. Contains an encapsulated whorl of connective tissue which shows both chronic and acute inflammatory diseases. General connective tissue increase, with occasional areas of inflammatory exudate and with apparently general edema, particularly about the enlarged and cystic acini in central portions of gland. Some of these enlarged acini are completely filled by a single great corpora amylacea, others contain several smaller ones. Inflammatory reaction about these acini is abundantly shown. The vessels show a moderate degree of arteriosclerosis.

CASE 20.—Morgue. Enlarged one-half. Great connective tissue hyperplasia, in places obliterating the acini, while in other places the acini are large and distended, probably from obstruction of their ducts. Great inflammatory exudate into periacinous tissue. Numerous and large corpora amylacea, some of which are surrounded by occasional epithelial cells, being otherwise encapsulated by connective tissue. A very marked and decisive specimen, showing all forms of inflammatory reaction. Blood vessels show but moderate atheroma.

CASE 21.—Morgue. Enlarged laterally, diminished in antero-posterior diameter. General connective tissue increase particularly in central portions of the gland, where the process is still active and round-cell infiltration general. Peripheral acini are largely dilated, surrounded by augmented connective tissue and many contain corpora amylacea. Such acini have but few epithelial cells and the walls are almost entirely fibrous and round cell infiltrations are quite frequent in them. Occasional acini contain only epithelial cells and detritus. The blood vessels show slight atheroma.

CASE 22.—Morgue. Slightly enlarged. Acini mostly dilated, filled by epithelial cells, though some contain corpora amylacea. The glandular epithelium shows numerous evidences of proliferation. Some contain several corpora amylacea of moderate and small size. There are occasional patches of round-cell infiltration about the acini, slight in degree. The specimen apparently represents an intra-acinal inflammation which has not extended beyond to any appreciable degree. Blood vessels natural.

CASE 23.—Morgue. Enlarged one-third. Very marked general connective tissue hyperplasia still active but not entirely acute in character. Extensive patches of infiltration in places. Interstitial growth about some acini has almost obliterated

Fig. 1.—Showing an area of small round cell infiltration. This condition is one of the most frequent manifestations of inflammation seen in hypertrophy of the prostate. Section taken from the peripheral portions of the gland. Case 34.

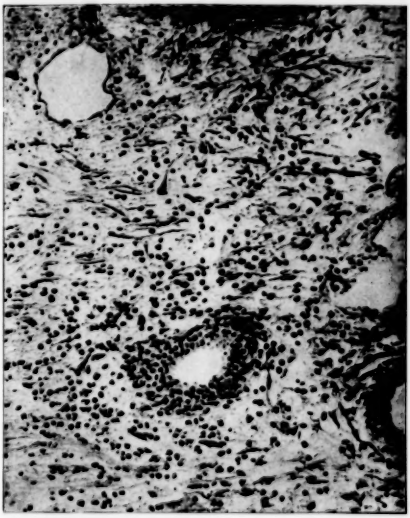

Fig. 3.—This picture may follow immediately on that shown in the previous plate. The inflammatory infiltration is less and is replaced by numerous fibroblasts and newly formed connective tissue fibers. The acinus shown is partly filled by proliferating epithelial cells. Case 55.

Fig. 2.—Showing general cell infiltration, edema and beginning desquamation of the cells of the acini. This stage precedes and induces interstitial hyperplasia. Case 42.

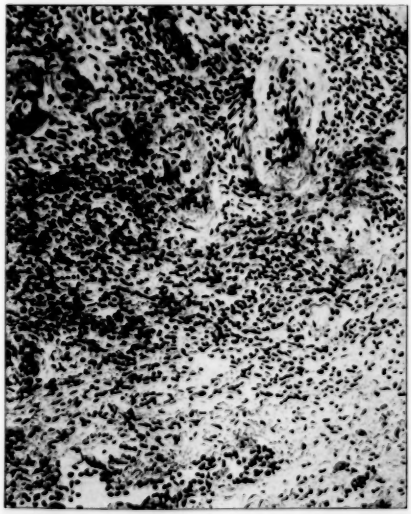

Fig. 4.—The plate shows several acini which have become compressed by the production of new connective tissue about them. This has resulted in the atrophy of the epithelium of the acini and finally terminates in complete replacement by hyperplastic connective tissue. From the periphery of the gland. Case 36.

Fig. 5.—Section of a prostatic fibroma. The hyperplastic tissue making up the substance of the fibromatous nodule is clearly defined from the more adult fibrous tissue surrounding it. We believe that conditions similar to this follow the process illustrated in the previous plate. Peripheral part of gland. Case 39.

Fig. 6.—Section from the central portion of a hypertrophied prostate. One of the excretory ducts of the glands is seen to be completely obliterated from the formation of new connective tissue in and about it. Round cell infiltration is present throughout the hyperplastic tissue. The acini in the outer portions of this gland were much dilated, forming the so-called cystic adenoma of the prostate. Case 41.

Fig. 7.—This shows the condition produced in the gland when the ducts become closed as shown in the previous figure. This lesion is commonly known as the cystic prostate, and in the fresh condition the spaces formed by the distention of the acini is filled by a semi-fluid material. Specimen taken from the outer part of gland. Case 47.

Fig. 8.—Section showing dilated acini which are filled by proliferating epithelial cells. This condition in some of its forms may be readily mistaken for carcinoma. Mitotic figures are not present in the cells in the centers of the islands, but are seen in the cells still lodged against the basement membrane, the inference is that reproduction is taking place only in the last mentioned cells. From outer portion of gland. Case 36.

Fig. 9.—Showing the presence of large corpora amylacea occupying the dilated acini. They have apparently formed from the detritus of breaking down cells in such a condition as that pictured in Fig 8. From the peripheral portion of gland. Case 53.

Fig. 10.—Conditions of this nature result when prostates containing large corpora amylacea become infected. Pus formation is shown in one part of the section and the remaining portions show interstitial sclerosis, atrophied acini and cell infiltration. From central part of gland. Case 52.

Fig. 11.—Showing proliferation of connective tissue about large corpora amylacea when situated in the outer zones of the gland. Atrophy of acini, general infiltration and connective tissue hyperplasia. Case 54.

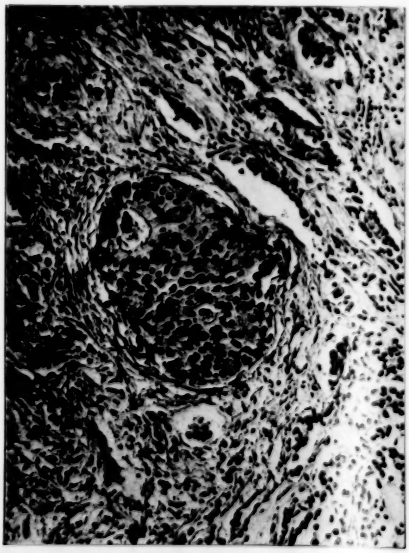

Fig. 12.—Carcinoma originating in the hypertrophied prostate gland. Case 45.

Fig. 13.—Carcinomatous infiltration of enlarged prostate gland. Case 50.

them, but occasional acini are dilated and these are mostly filled with epithelial cells. In the central part is found detritus, showing evident beginning formation of corpora amylacea. Blood vessels show quite extensive arteriosclerosis, but perivascular connective tissue increase is still more evident. This specimen shows to a very extreme degree a hyperplastic inflammation of the connective tissue with slight involvement of the glandular parenchyma.

CASE 24.—Morgue. Enlarged one-fifth. Acini generally dilated and filled by cells and detritus. Formation of numerous small corpora amylacea in the acini, connective tissue of gland stroma not increased. Blood vessels natural. Lesions are apparently only the distention with marked epithelial proliferation in the acini. Probably represents an early stage of prostatic hypertrophy.

CASE 25.—Morgue. Moderate hypertrophy, very hard. Increase of connective tissue marked, very extensive and general infiltration of small round cells, not only in stroma, but also in acini. Muscle tissue mostly displaced by the hypertrophic connective tissue. Acini which are not involved by cyst formation mostly filled by epithelial cells or detritus. Many acini completely collapsed from the great proliferation of surrounding connective tissue.

CASE 26.—Morgue. Moderately enlarged. Acini largely dilated, contain large corpora amylacea in various stages of formation. Other acini are filled by epithelial cells and detritus. Many are surrounded by numerous but small areas of round-cell infiltration and in the neighborhood of these connective tissue hyperplasia is evident, particularly immediately around such acini, where in some cases the process is well advanced. Other acini appear perfectly natural, and in many places the stroma is also normal, showing regular proportion of muscle and connective tissue and no inflammatory infiltration. Blood vessels show moderate atheroma.

CASE 27.—N. Y. H., No. 2431. Moderate general connective tissue hyperplasia. Acini in general show very little change, except where acute inflammatory process is present. Very intense small round-cell infiltration in peripheral portion, some places of which show pus formation and local tissue necrosis, with in places hemorrhagic extravasation. A true acute and sub-acute inflammation. Few small corpora amylacea.

CASE 28.—Morgue. Moderate general hypertrophy. General connective tissue hyperplasia of chronic form. Acini dilated and filled by proliferating cells. Perivascular connective tissue increase marked. Moderate atheroma.

CASE 29.—Carnegie Museum. Great middle lobe hypertrophy. General connective tissue hyperplasia. Areas of round cell infiltration numerous. Acini are enlarged, cystic and filled by epithelial cells and detritus, with formation of corpora amylacea. Moderate atheroma. Many vessels are surrounded by exudates of small round cells.

CASE 30.—N. Y. H., No. 3878. Moderate general chronic connective tissue hyperplasia, but the most marked lesion is a pronounced infiltration of small round cells, between the connective tissue fibers. In certain parts of the peripheral portion, particularly in the region of the prostatic urethra, this cellular infiltration has become so extreme as to result in tissue necroses and actual pus formation. In places this process has practically wiped out the acini and the infiltrations are found scattered throughout the entire gland. Some of the centrally situated acini are dilated, being filled by cells, and cell detritus. In the most acute inflammatory areas the vessels are congested and a few hemorrhagic extravasations are found in the region of the urethra, otherwise the vessels show only a slight atheroma.

CASE 31.—Prostate operated on by Dr. Guiteras. Greatly enlarged. Great hyperplasia of adult connective tissue throughout entire gland, most abundant about the dilated acini. Areas of round-cell infiltration are common and have apparently originated from or about the acini. Centrally situated acini are much dilated and are mostly filled with epithelial cells or detritus, which has resulted from disintegration of these cells. Some of the acini have apparently ruptured into their neighbors. Corpora amylacea are small and infrequent, but formation of them is apparently taking place from cell detritus. The vessels show but very slight atheroma in most places and the interstitial overgrowth is clearly not of arterial origin. In some places small round cell infiltration of the septa between the dilated acini is very extreme. Of course where interstitial hyperplasia has been great muscular atrophy has been correspondingly marked.

CASE 32.—Enlarged prostate removed by Dr. Lilienthal. Very marked hypertrophy. General connective tissue hyperplasia, in places with actual formation of fibrous nodules, where all traces of muscle and glandular tissue are replaced by a firm mesh of hyperplastic interstitium. Areas of round cell infiltration are frequent and large and usually bear direct relation to the acini, which are mostly small, being compressed by the connective tissue growth. They are largely filled by cells and detritus. Corpora amylacea are infrequent and small, being found only in the larger acini. The vessels show a moderate atheroma.

CASE 33.—From Carnegie Laboratory Museum. General hypertrophy. Tumor projecting into bladder from middle lobe. Peripheral portions made up of a dense zone of connective tissue containing but few muscle fibers. Areas of small round-cell infiltration are frequent both in the outer and in the central portions. Central portions chiefly made up of greatly dilated acini, filled with broken-down cells and detritus. Frequent areas of inflammatory exudate about the dilated acini. Corpora amylacea frequent but small. Blood vessels normal.

CASE 34.—Carnegie Laboratory. Tumor of middle lobe. General fibrosis. Acini as a rule are atrophied, apparently from the pressure of the surrounding hypertrophic connective tissue. Some of the acini are, however, greatly dilated and are filled with cells, detritus and small corpora amylacea. Numerous areas of small round-cell infiltration surrounded by zones of fibrosis. The walls of the blood vessels are slightly thickened.

CASE 35.—From Carnegie Museum. Prostate measures 6 by 10 cm. Hypertrophy involving all portions equally. Enormous distention of acini which are filled by broken-down cells, detritus and small, but frequent corpora amylacea. Stroma very scant in central portions, but peripheral portions show hyperplastic connective tissue and are almost devoid of muscle fibers. Blood vessels apparently normal.

CASE 36.—From Carnegie Laboratory Museum. Entire prostate enlarged, particularly the middle lobe, which is about three times the usual volume. Walls of bladder hypertrophied and sacculated. Marked general increase of fibrous connective tissue. Muscle fibers are still abundant, but many are degenerated, as though from pressure. Many of the acini are distended with broken-down cell detritus, but others are atrophied and show marked increase of the connective tissue about them with resulting complete atrophy of the acinus. In these areas inflammatory changes are very marked surrounding the alveoli. Blood vessels show a marked atheroma.

CASE 37.—From Carnegie Laboratory Museum. General hypertrophy with tumor of middle lobe. Sections of the middle lobe tumor show an incapsulated fibromatous nodule 1 cm. in diameter. This area shows a well-defined capsule of adult connective tissue enclosing acini atrophied or dilated. In either case the lumen is filled by detritus and small corpora amylacea. Blood vessels are numerous and thick walled. Round-cell infiltration about the acini is frequent and it is also present about the small blood vessels.

CASE 38.—From Carnegie Laboratory Museum. Enlarged about four times. Hypertrophy most marked in the left lobe. Peripheral portions made up of thickened and infiltrated connective tissue. In the central parts the acini are either much atrophied or distended. In the latter case the central portion of the acinus is filled with a fine granular debris and the walls are covered by a thin layer of columnar or squamous epithelium. The connective tissue cells show many evidences of proliferation. Muscular atrophy is clearly shown, particularly about the enlarged acini, where more or less inflammatory infiltration is present. Blood vessels show no change.

CASE 39.—Carnegie Laboratory Museum. General hyper-

trophy of prostate and of the walls of the bladder. Very marked connective tissue hyperplasia with general glandular atrophy, particularly where the acini are compressed by the hyperplastic connective tissue. Patches of inflammatory infiltration are present about nearly all of the acini and also about the smaller blood vessels. Small fibromata, highly vascular and evidently of recent origin, are present in places (see plate). Blood vessels slightly thickened.

CASE 40.—Carnegie Laboratory Museum. Great enlargement of the middle lobe with less marked hypertrophy of the lateral lobes. Peripheral portions show marked fibrous increase. Central portions made up of greatly dilated acini, between which thin connective tissue walls intervene. These walls are almost universally infiltrated with small round cells. Blood vessels moderately thickened.

CASE 41.—Specimen removed by Dr. Morton. General augmentation of the connective tissue stroma. Frequent areas of inflammatory exudate. Acini are generally small and are frequently surrounded by zones of infiltration. Walls between the acini are atrophied. Most of the acini contain proportionately large corpora amylacea. Blood vessels natural.

CASE 42.—Carnegie Laboratory Museum. Prostate enlarged about 6 volumes. Abscess cavity in anterior portion 2 cm. in diameter communicating with posterior urethra through dilated duct of prostate. Section taken from portion of gland distant from abscess cavity. The entire interstitium of gland is edematous and is infiltrated with numerous small round cells and plasma cells. This infiltration is most pronounced about the acini, which are filled for the greater part by broken-down cells and by inflammatory exudate. Some of the acini are compressed by the exudate about them. Pus formation is not present in these sections. Under high magnification the epithelial cells of the inflamed acini show frequent karyokinetic figures.

CASE 43.—From Carnegie Laboratory Museum. Moderate degree of general hypertrophy. Muscle tissue almost completely absent and in some portions the glandular elements are represented by spaces lined with a layer of simple squamous epithelium filled by a single large amyloid body and invested by a capsule of hypertrophic fibrous connective tissue. In other portions of the same gland the sections show but very numerous small acini with thin walls, evidently formed by the distention of the acinus by the pressure of its own secretion since the walls of the acini show numerous evidences of distention.

CASE 44.—Carnegie Laboratory Museum. Moderate hypertrophy limited in the lateral lobes. Great general connective tissue hyperplasia. One side of the section shows a few atrophied voluntary muscle fibers surrounded by a greatly augmented endomysium. The acini are large, mostly filled by cells and by corpora amylacea and frequently surrounded by an edematous infiltrated interstitium. The blood vessels show thickened walls.

CASE 45.—Carnegie Laboratory Museum. General hypertrophy, particularly of the middle lobe. Walls of the bladder are hypertrophied and ulcerated. Very marked hypertrophy of the connective tissue with almost complete atrophy of the muscle fibers. Acini for the greater part filled by cell detritus and inflammatory exudate, but in certain of the acini the epithelial cells have taken on very active proliferative changes with the result that they are filled with large epithelial cells supported by connective tissue stroma which has grown in from the walls of the altered acinus. The nuclei of these cells show numerous karyokinetic figures and the specimen is undoubtedly one of carcinoma, originating from the inflamed acini of the gland. Blood vessels greatly thickened throughout the section and in places endarteritis obliterans is shown.

CASE 46.—Carnegie Laboratory Museum. Marked hypertrophy of lateral lobes. The interstitium throughout the entire section is greatly increased, particularly about the glandular acini, where evidences of recent connective tissue proliferation are abundant. The acini are atrophied and contain frequently but a single large amyloid body. Other acini are filled by the epithelial cells and small quantities of detritus. The adventitia of the blood vessels is generally thickened.

CASE 47.—Carnegie Laboratory Museum. Moderate hypertrophy. Numerous small semi-pediculated nodular masses project from the surface of the prostate. Marked general connective tissue increase with consequent muscular atrophy. The acini are greatly dilated and are usually lined by a thin layer of simple squamous epithelium. They contain detritus which has apparently remained after the evaporation of fluid. Corpora amylacea, where present, are usually single and completely fill the acinus in which they are lodged. The vessels show marked endarteritis.

CASE 48.—Carnegie Laboratory Museum. Great hypertrophy of the middle lobe. Peripheral portions show a very marked fibroid increase which is of less pronounced degree in the central portions of the gland. The central acini are distended by epithelial cells and detritus. Corpora amylacea are small and frequent. There is a general inflammatory exudate throughout the entire section. Blood vessels normal.

Case 49.—Carnegie Laboratory Museum. Great enlargement of the entire gland. Small pediculated tumor projects from middle lobe into cavity of bladder. This last portion shows in section almost complete substitution of glandular tissue by dense fibrous connective tissue which encloses frequent corpora amylacea of large size and surrounded by connective tissue only. Blood vessels moderately thickened.

CASE 50.—From Carnegie Laboratory Museum. Moderate hypertrophy involving all portions of the gland. Wall of bladder thickened and the seat of several carcinomatous ulcerations. The connective tissue of the gland is greatly increased and is infiltrated in almost all portions by columns of actively proliferating epithelial cells. A few large corpora amylacea are found situated in atrophied acini and the acini throughout the section are compressed by the greatly augmented connective tissue and by the infiltration of this stroma by cancer cells. Blood vessels moderately thickened.

Case 51.—Carnegie Laboratory Museum. Moderate hypertrophy of the lateral lobes, great enlargement of the middle lobes. Great thickening of the walls of the bladder. Peripheral portions of the gland show an advanced connective tissue hyperplasia with inflammatory infiltration. Central portions show distension of the acini with atrophy of their walls and formation of numerous small corpora amylacea. Blood vessels moderately thickened.

CASE 52.—From autopsy. Man aged 57. Patient died of meningitis following abscess of the prostate, pyonephrosis and general sepsis. Prostate enlarged about six volumes. Abscess cavity of prostate measuring 2x3 cm., communicating with posterior urethra through ducts of prostate gland. This case gave a history of long standing but "cured" posterior urethritis. Acini throughout entire gland are infiltrated with pus cells. In this exudate are found frequent large corpora amylacea. The connective tissue stroma is greatly augmented throughout, the increase being in adult fibers. There is inflammatory exudate of the entire glandular substance, even where far distant from the abscess cavity.

CASE 53.—From autopsy. Man aged 60. Cause of death acute on chronic alcoholism. Prostate enlarged about one volume. Peripheral portions show a marked increase in connective tissue. The stroma throughout the entire gland is infiltrated with small accumulations of round cells. In the peripheral portions of the gland the acini are greatly dilated and contain very large corpora amylacea. In the central portion of the gland the amount of connective tissue is more abundant and the glandular acini are smaller and are either empty or contain less detritus. Corpora amylacea are numerous, though small. The blood vessels are moderately thickened. In the areas of greatest connective tissue hyperplasia, that is in the central portions of the gland, muscular atrophy with connective tissue substitution is very pronounced. Blood vessels normal.

CASE 54.—From the autopsy of a man aged 53, dead of alcoholism and pneumonia. History of chronic prostatitis obtained. Marked hypertrophy, particularly of the lateral lobes. General connective tissue hyperplasia. Infiltration of small round cells through entire stroma, especially about the acini, which are generally atrophied and contain large corpora amylacea. Blood vessels moderately thickened.

CASE 55.—Specimen removed at operation by Dr. Geo.

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Stewart. Patient aged 57. Has had difficulty in passing urine for past ten years. Entered Bellevue Hospital with retention of four weeks' standing. Urine drawn for three weeks by prostatic catheter. When in good condition, operated on by Dr. Stewart. Bloodless specimen weighed 115 gm. Acini generally dilated and filled by proliferating epithelial cells, cell detritus and numerous small corpora amylacea. Several acini are largely filled by pus cells. Inflammation has apparently traveled from these acini to others in the neighborhood. The connective tissue stroma is hyperplastic and contains many areas of small round-cell infiltration. Interstitial hyperplasia has been so marked about certain acini as to produce marked glandular atrophy. This is more observable about the ducts in the neighborhood of the posterior urethra.

CASE 56.—Removed at operation by Dr. Chas. Phelps. Patient an old man who gave typical history of enlarged prostate of long standing. Mass of tissue removed measured 8x7x5 cm., very nodular. Gross diagnosis of cancer of prostate. Entire tissue greatly infiltrated with serum, stroma very edematous and shows exudate of small round cells, occasional leucocytes and many plasma cells. General hypertrophy of interstitium, particularly in region of posterior urethra where there are many evidences of a chronic inflammatory process of long standing with the result that hyperplasia of connective tissue has constricted the prostatic ducts, producing great distension of glandular acini in peripheral portions of gland. Acini about border of gland largely filled with proliferating epithelial cells, cell detritus and numerous small amyloid bodies. Acini in central portions of gland often occupied by single very large amyloid concretions and surrounded by zone of infiltration. The blood vessels show no abnormality.

CASE 57.—Specimen removed at operation by Dr. Hartley. The specimen is divided histologically into two distinct parts. The largest of these is located in the anterior portion of the tissue and extends from the periphery to the central parts of the gland. It is made up of large hyperplastic fibers of connective tissue in which beginning sclerosis is apparent. Numerous fibroblasts are also present and many of the connective tissue cells show karyokinetic figures. Areas of small round cell infiltration are frequent and include occasional plasma cells intermingled with the round cells. The acinal arrangement is wholly obliterated in these portions by the overgrowth of the connective tissue, but in several places multiplying epithelial cells are found, mostly in rows infiltrating between the connective tissue fibrils and in places forming small islands of actively dividing cells. Apparently the epithelial proliferation is a recent process and it probably is developing into carcinoma of the scirrhus type. The histological picture is found only in certain parts of the posterior portions and near the center of the gland. These show an active connective tissue hyperplasia, but the fibers are more of the embryonic type than those found in the previously described portion. The epithelium in this portion of the gland has more of the normal arrangement and though the cells are dividing they do not have the appearance of cancerous growth. The blood vessels show slight thickening. Corpora amylacea are few, found only in the second portion and are small in size.

CASE 58.—Tumor removed from the lateral lobe of an enlarged prostate of an old man at autopsy. The sections show marked hypertrophy of the interstitium, the increase being in adult tissue only. The acini are small and are much encroached upon by the overgrowth of connective tissue about them. Several acini are partly filled by epithelial cells which are largely broken down. The blood vessels are slightly thickened. Corpora amylacea are of small size and few in number.

A review of this series of 58 cases shows that abundant evidences of inflammation are present in every gland. Naturally, the precise character of the inflammatory lesion differed considerably and often a single gland showed several types. The most common lesion noted was interstitial hyperplasia and this was almost invariably accompanied by resultant atrophy of the muscle cells of the gland. Thus, in 41 of the 58 cases, the prostatic hypertrophy was entirely or largely due to increase of the fibrous connective tissue. A considerable percentage of these cases showed fibroblasts and newly-formed fibers as well as other evidences of recent proliferation of the connective tissue, as shown in Fig. 3.

Thirty-six cases show areas of inflammatory infiltration, usually consisting principally of patches of small round-cell infiltration, though some showed a more extreme change, characterized by the presence of plasma cells and marked edema, as shown in Case 42 from which Fig. 2 was taken. In 5 cases pus formation was present; in 3 of these infection had clearly taken place from the posterior urethra. It is probable that had all the sections been so cut as to include the posterior urethra we should have found that this were even more frequently the case. Nineteen of the 58 cases showed more or less cystic formation. The true character of these cysts and their mode of formation from inflammatory disease of the prostate will be discussed later in the paper. These 19 cases are such as would ordinarily be classified as cystic adenomata of the prostate; that they are in no way adenomata will be shown later. Of the 6 specimens, in which marked proliferation of the glandular epithelium was present, 3 belong also to the cystic prostates. Only 5 neoplasms of the prostate were found. Of these 2 were carcinomata and 3 fibromata. Case 57 also probably represents an early stage of cancerous growth. Neither fibro-myomata, myomata nor true adenoma were present. Atheroma or endarteritis of moderate to marked degree was present in 17 cases.

To recapitulate briefly: in the 58 cases studied all showed evident inflammatory lesions. In 41 the increase in size was entirely or chiefly due to fibrous proliferation, but in 36 inflammatory infiltration played a leading or contributory rôle and in 19 cystic distension of the alveoli was present in sufficient degree to notably increase the size. Six tumors were present, 3 of which sprang from the interstitium (the fibromata, Cases 19, 37, 39) and 3 from the epithelium (the carcinomata, Cases 45, 50 and 57). No cases of true glandular or muscular hypertrophy were found.

Interstitial hyperplasia is then found to be the most frequent cause of hypertrophy of the prostate. That interstitial increase after adolescence is the result of inflammatory disease is so generally recognized that it is not necessary to discuss this point at this time. Nevertheless, since it is the most frequent factor in the production of prostatic hypertrophy, it must be considered in its relation to this condition at some length.

It is our purpose to discuss later the origin of the process so we shall assume a condition of acute or subacute prostatitis as a starting-point. In all organs, acute or sub-acute inflammation gives rise to interstitial hyperplasia; small wonder, then, that the process becomes marked in the prostate, an organ abundantly supplied with blood vessels and highly cellular connective tissue. The interstitial hyperplasia, coupled with more or less edema and cell infiltration, always associated in so highly vascular a tissue, gives rise to the acute prostatic hypertrophy, such as is found in the young. With a cessation of acute inflammation following a removal of its cause and normal reaction on the part of the tissues of the organism, interstitial hyperplasia should cease and retraction and atrophy follow from the sclerosis of the fibers, as the embryonic tissue takes on the adult form. Such a result does follow in favorable cases of prostatitis in the young and healthy, and, as the sclerosis of the newly-formed tissue continues, the atrophic or small hard prostate follows to a greater or less extent, always

provided, however, that this same fibrous sclerosis does not excite secondary changes in the glandular epithelium. But in the middle aged or old man, particularly where more or less general or arterial disease exists, resolution and healing do not so readily follow and instead of cessation of connective tissue hyperplasia the condition becomes chronic. With the increased fibrosis, consequent thickening of the walls of the veins and lymphatics follows and chronic congestion is added to the factors tending to prolong and increase interstitial hyperplasia, edema and inflammatory exudation. So it happens that in the enlarged prostate of the aged acute and sub-acute proliferations are found mingled with the thickened masses of adult sclerosed connective tissue. As an inevitable result of this overgrowth of stroma, atrophy of the smooth muscle cells follows. This may be of greater or less degree, greater if the inflammation partakes more of the acute type where parenchymatous degenerations are most rapid, less if the process be more chronic.

As a result of this overgrowth alone, when continued for months or years, considerable prostatic hypertrophy may follow, but to this process is added secondary changes, taking place in the glandular tissue, which increases the enlargement of the prostate.

If the fibrosis be most marked in the peripheral portions of the gland it results in encroachment upon and fibrous thickening of the walls of the alveoli which finally become compressed and obliterated—Fig. 4. If the hyperplasia be most marked in the central portions of the gland or about the ducts this results in obstruction or occlusion of the ducts—Fig. 6. After occlusion of the ducts continued secretion on the part of the glandular epithelium causes a distension of the acini and alveoli, producing the familiar cystic adenoma of the prostate—Fig. 7. When now desiccation or condensation of this secretion follows, corpora amylacea form—Fig. 9. Even though the duct be partly pervious the formation of these bodies and the inspissation of the secretion, mingled with desquamated epithelium, renders normal drainage of the alveolus impossible and cysts of considerable size result. If absorption through the walls be marked and the surrounding fibrosis sufficiently active a single amyloid body may later be found surrounded by a thick connective tissue capsule, perhaps still lined by a layer of atrophied squamous epithelial cells—Fig. 11.

Although three small encapsulated fibromata were found in our series of specimens, and though their structure is identical with that of fibromata found elsewhere, we are still loath to classify even these as true neoplasms of idiopathic origin. When the proliferation of stroma is especially active about a group of acini, the actively growing fibroblasts compress these gland sacs more and more until, as shown in Fig. 4, atrophy of the epithelium takes place and fibroblasts grow in, filling up the space, producing a nodule of highly cellular young connective tissue enclosed by a capsule of more dense adult fibers—Fig. 5. Undoubtedly a true fibroma may originate from the prostate gland, but our study of these specimens leads us to the above explanation for the formation of the prostatic fibromata seen by us.

Albarran and Halle have recently called our attention to the frequency with which carcinoma originates in hypertrophic prostates. While we concur with these authors in their general statement, we do not accept as cancer most of the cases which they picture and classify as such; of this more later. Careful study of our three cases of hypertrophied prostates, in which carcinomatous growth was present, we believe throws some light on this very important subject. In two of our cases cancerous invasion of the walls of the bladder was present, but after careful study of the gross and microscopic specimens we feel justified in concluding that the growth was primary in the prostates. In our cases, the cancer involved but a limited part of the enlarged gland and the usual interstitial and inflammatory infiltrations of the ordinary enlarged prostate were present—Figs. 11 and 12. For these reasons we believe that the cancer had attacked the glands subsequent to their hypertrophy, as is undoubtedly the case with specimen 57. It is universally admitted that the chronic or sub-acute inflammation of glandular stroma tends toward the production of malignant epithelial proliferation. Surgeons and pathologists admit that these conditions predispose toward cancer of the mammary gland and so in the enlarged prostate we have a chronic interstitial proliferation compressing and irritating the alveolar epithelium; with these most favorable conditions we can only express surprise that cancer of the hypertrophied prostate is not more frequent.

In a certain number of enlarged prostates we find an epithelial proliferation of an entirely innocent character. These are those cases in which dilatation of the glandular sac is followed by a proliferation of the epithelium which finally completely fills the gland sac and gives rise to an appearance frequently resembling carcinoma—Fig. 8. It is this condition, in certain of its modifications, which we believe Albarran and Halle have in some cases mistakenly called cancer. Six of the specimens studied by us show this lesion in its most exquisite type. Ordinarily it can easily be distinguished from carcinoma by the fact that the cells resting on the basement membrane are distinctly columnar and that those in the central portions of the cell islands show many degenerative alterations of both nucleus and cytoplasm without karyokinetic nuclear figures, except in the cells resting on the basement membrane. When, however, such acini become greatly compressed by the interstitium about them, they resemble cancer very closely, but this new growth should not be diagnosed unless it be found that the proliferating epithelial cells are invading the tissues about the acini—Fig. 13. We fully agree with Albarran and Halle, nevertheless, in their statement that primary carcinoma of the prostate is much more frequent than generally recognized, and it is highly probable that the hypertrophied organ is more than seldom the site of unrecognized primary carcinoma. Undoubtedly, true adenoma of the prostate may exist. We have, however, not yet seen a case and we contend that the condition ordinarily described as such is not adenoma and that its origin is due to the occlusion of the glandular ducts after the process described above.

Atheroma has been considered by some as an etiological factor in the production of prostatic hypertrophy. Moderate to extreme atheroma was found in seventeen of the cases of this series, but in each instance it was accompanied by other and more pronounced lesions more directly bearing on prostatic hypertrophy. It is now generally admitted that when atheroma is found in the prostate it only represents a local manifestation of a general condition and that it is just as frequent in normal or atrophic prostates taken from men of like age as in the hypertrophied gland.

The question has doubtless occurred to many of our readers, if these inflammatory changes noted by us may not be secondary or accidental in character, caused by the

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prostatic hypertrophy and not its cause. We believe that this legitimate question can be answered in the negative. We have endeavored to show in the above examinations that the increase in size of the glands was either immediately or secondarily due to the direct inflammatory exudates or to the reaction on the part of the tissues to these processes, i. e., interstitial hyperplasia.

Granting that our observations in this series of specimens is correct, the origin of the inflammation is yet to be ascertained. In certain of our cases (30, 52, 55, and 56) the sections apparently indicated that the primary inflammatory process had originated about the posterior urethra. Had all our sections been chosen with the determination of this point in view, it is probable that a larger percentage would have shown this condition. But at best, such deductions from the histologic picture are uncertain and more or less speculative. In our opinion clinical evidence is much more trustworthy. It will hardly be questioned that prostatitis most frequently results from, or follows, posterior urethritis, and posterior urethritis is usually primarily or secondarily of gonococcic origin. Asserting as we do, however, that prostatic hypertrophy is the direct result of chronic prostatitis, by the same chain of clinical evidence we are forced to the conclusion that it follows posterior urethritis from whatever cause. For the reasons stated above chronic proliferative prostatitis is more frequent in the aged than in the young.

From our study of prostatic hypertrophy we believe that the usual story of this disease is as follows: Given a posterior urethritis, infection of the ducts and alveoli follows. This is accompanied by inflammatory infiltration about the walls of the infected sac. Following this inflammatory exudate (Fig. 1), which may involve large portions of the gland, fibroblasts and plasma cells appear and acute interstitial hyperplasia becomes inaugurated, as shown in Figs. 2 and 3. The changes which now follow depend largely on what portion of the gland is involved. If the hyperplasia be most marked in the peripheral portions, the acini become compressed and the epithelium atrophies (Fig. 4) and from such acini small fibromata may result—Fig. 5. If the process be more slow and infiltration still active, the condition shown in Fig. 6 may follow. Should the fibrosis be most marked about the ducts or the glands, constriction of these tubes may produce pictures like that shown in Fig. 7, which may be followed by that shown in Fig. 9. Now, if fibrosis be marked about the acini the condition shown in Fig. 11 may happen; on the other hand, acute inflammation with pus formation may take place, as seen in Fig. 10. If proliferation of the alveolar epithelium be excited, pictures like that of Fig. 8 are produced and if this irritation result in malignant cell proliferation true cancer may form (Fig. 12) finally with carcinomatous infiltration of the interstitium—Fig. 13.

This work on prostatic hypertrophy has purposely been founded on histologic findings only, for the reason that in the early days, when the study of prostatic hypertrophy was necessarily purely clinical, or aided only by gross observations or rude microscopic methods, the general impression was that the disease was inflammatory in nature. This fact has already been stated in our introduction. This idea held until, after incomplete sporadic microscopic studies, a theory was formed, founded purely on the histology of the disease, that prostatic hypertrophy was a true tumor formation and idiopathic in its origin. Nearly all text-books on general pathology now give this view and the greatest of pathologists have favored the theory either by copying what others have written or by confining their personal observations to a few specimens only. Serious histologic studies of the hypertrophic prostate have not been numerous and for this reason, if for no other, we are much indebted to the recent, most careful and thoroughly scientific study of Ciencanowski, who has fully demonstrated by his histologic observations that hypertrophy of the prostate is an inflammatory disease.

This study was taken up by one of us with the idea of disproving the statements of Ciencanowski and satisfying himself of the truth of the idea expressed in nearly all works on pathological anatomy. The result has been a complete conversion to the views of Ciencanowski, whose conclusions we endorse fully, as far as our work has covered his field. We therefore take no credit to ourselves for originality of thought or discovery, leaving all credit to the clinical observers who first advanced the theory and to Ciencanowski who first fully and finally proved its truth.

We may briefly state our conclusions as follows:

1. Prostatic hypertrophy of the aged is the result of chronic prostatitis.
2. It most frequently arises from chronic posterior urethritis, of whatever cause.
3. True neoplasms of the prostate are rare and are not concerned in the production of prostatic hypertrophy.
4. Carcinoma is apt to occur in the hypertrophied prostate as a result of the chronic inflammatory process.

SARCOMA OF THE UTERUS.

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CLINTON, IOWA.

During the present year a lady 65 years of age came under my care presenting the following history and symptoms. The mother of several children, she had enjoyed good health until about two years ago, when she began to be troubled with constipation and pain in the lower part of abdomen and a sense of weight and pressure in the pelvis. These symptoms gradually increased. About six months prior to coming under my observation the symptoms became more acute, when she had, according to her statement, a discharge of fluid from the bowels. This gave her a measure of relief, but soon the same chronic condition she had previously suffered from appeared and continued on with some increase in severity until she came under my care in August of last year. A physical examination revealed the uterus to be uniformly enlarged to two or three times its normal size and appeared to be firmly impacted in the pelvis. There was no discharge from the organ and the symptoms seemed to be largely due to pressure. The general condition of the patient appeared to be good, although she had lost in weight and was somewhat anemic. This could be accounted for in part at least, on the ground of constipation and impaired digestion.

The age of the patient and the fact of the growth appearing after the menopause suggested malignancy, but the absence of positive symptoms of cancer indicated the possibility of a non-malignant growth. Assuming the probability of an enlarged and myomatous uterus I opened the abdomen. The peritoneum was very much thickened and there was found a considerable quantity of free fluid in the abdominal cavity. The abdominal

wound was made sufficiently large to admit of a free examination of the uterus after the intestines were walled back by large abdominal pads.

The bladder was normal in appearance. The uterus was uniformly enlarged and occupied the usual position in the pelvis and reached upwards to a point corresponding to a uterus enlarged to the fourth month of pregnancy. The anterior surface of the uterus presented a grayish-white appearance, and fluctuated on palpation. The sigmoid was well crowded over to the left. The uterus was firmly adherent on its posterior surface. Masses of new growth extended out on either side to the ovaries and broad ligaments. It was at once apparent that we had to deal with a sarcomatous uterus and that any attempt to remove it would involve a dangerous hemorrhage with small prospect of getting all the diseased tissue. I could not see my way clear to secure safe hemostasis on either side of the uterus, and having in mind the certain and speedy return of the disease in such cases, I determined not to expose the life of the patient in the useless attempt to remove the organ. I opened the cyst on the anterior surface of the uterus just sufficient to explore the interior, about one ounce of clear fluid escaped, revealing a very red and irregular velvety surface. The thick cyst wall became flaccid when the fluid escaped, which enabled me to surround the three-quarter inch incision with a purse-string suture slightly inverting the edges, thus closing the opening completely. I now reinforced the purse string with a few additional sutures. Catgut was used in both instances. I folded over the sutured surface a strip of iodoform gauze, which I allowed to extend out of the lower angle of the wound, inserting a secondary suture to be tied when the gauze was removed on the sixth or eighth day; otherwise the wound was carefully closed. On the eighth day the gauze was removed, followed by the discharge of some serous fluid and the secondary suture tightened. The patient was discharged and returned home, a distance of 150 miles, in good condition at the end of the second week.

It was my impression that the less we disturbed the diseased organ the better it would be for the patient. I doubted the wisdom of opening the cyst, but the unusual appearance of the organ and the desire to discover the condition inside the cyst led me to do so.

My personal experience with diffuse sarcoma of the uterus is extremely limited, but the literature of the subject does not give much warrant for operative procedures when the disease has advanced so far as to make the diagnosis easy before an operation is undertaken. In early cases where scrapings have revealed the sarcomatous nature of the disease better results may be expected, or in somewhat later cases, when the disease is clearly confined to the organ and the tying off can be easily accomplished without leaving any part, an operation may be warranted. But when the disease has plainly spread out over the broad ligaments, even to a moderate extent, no good can be accomplished.

A recent examination shows that the growth has rapidly increased since the exploratory operation and her general health has correspondingly declined and the fatal termination is not far off. I realize the fact that a diagnosis as to the character of a morbid growth without a microscopic study lacks in scientific accuracy, but the clinical importance of arriving at a conclusion at the operating table was, in my judgment, of the utmost importance. If the disease was malignant I ought to have removed it; if non-malignant, I am very sure I would have shortened her life. I recalled the special features in the history of the case, that a few months previous to the operation a quantity of fluid had escaped from her bowels, giving her for a time some relief. This was no doubt due to the emptying of a cyst lying in contact with the sigmoid. I took into account the general appearance of the mass, the free fluid in the abdominal cavity, the adhesions and the extension of the growth on to broad ligaments. I had never before seen a cyst sarcoma of the uterus or a sarcoma which had undergone cystic degeneration. But I was so firmly impressed with the idea that I had one before me that I had no hesitation in acting on the theory that it would be much better for the patient to let it alone. What the antecedents of the growth were I do not know. But it is quite probable that a fibro-myoma involving the fundus had existed for perhaps a long time which had more recently undergone cystic and sarcomatous degeneration. An important diagnostic symptom was absent, namely, a uterine discharge; but it may be assumed that the endometrium and sub-mucous tissues were not involved. However, there was no distinct tumor and the organ appeared to be uniformly enlarged, a condition which would seem to favor the probability of such a general involvement as to lead to hemorrhages. It may be observed that recently a moderate loss of blood has occurred on one or two occasions. Since the operation, and for some time before, she has suffered severe pain in the abdomen, has lost much in flesh and has become very anemic.

The development of a diffuse sarcoma of the uterus after the menopause is much less frequent than carcinoma, but that it does occur late in life is well established, and it has particularly been observed to occur as the result of degenerative changes in fibro-myomas, which have no doubt remained stationary for a long time. When these growths, which appear to give no serious trouble and make no advancement, begin to take on a new growth attended with pain, loss of weight and anemia they may be looked upon with great suspicion if the change occurs after the menopause. This fact suggests the danger which may arise in allowing these apparently harmless uterine tumors to remain, and whether the risk of letting them alone is not greater than the risk of life in their removal. There can be no question on this point, if after 50 years of age a more or less rapid growth is discovered, but then it may be too late for the best results. Is it not true that any form of uterine growth is a menace to life at some time, even if it is apparently stationary?

THE RELATIONSHIP OF ANTISTREPTOCOCCUS SERUM TO THE TREATMENT OF PUERPERAL SEPSIS.

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Since the first disturbances of unknown origin in the puerperal state, up to the time of Semmelweiss, who stimulated investigation of fever in the puerperal state, this subject has been the bone of contention and the modus operandi for its successful treatment has been the highest aim of all clinicians.

Serum therapy has been deemed ideal for the treatment of diseases due to specific organisms. Pasteur, Koch, Behring and others contended that the bodily

functions in the destruction of toxins could be increased by the introduction of the attenuated serum of those definite organisms. Theoretically this worked admirably, but thus far the only successes are in diphtheria and tetanus, and in the many experiments conducted with antistreptococcus serum we do not in all the literature find one report of its value in the prevention of infection from the streptococcus. In animal experimentation, J. Petruschy[1] says: "The protective power against infection with streptococcus Starmock, as well as two forms from Lyons, did not show any protective power against infection." He also states that serum can not be recommended for use upon man, and also that positive knowledge for a serum therapy against streptococcus infection has as yet not been produced.

Of course, I admit that there are some cases reported in the literature in which recovery has been stated to be due to this form of treatment. I here agree with Petruschy when he states that all other forms of treatment were indulged in, and why can not the recovery be attributed to other forms of treatment or to nature? In none of the cases that we have reviewed did we find the only treatment that of the serum.

Williams[2] reports fourteen cases of puerperal septicemia treated by antitoxin. In these no benefits followed the injections. Of the two fatal cases, in one the course of the disease was not affected by the serum; the other died during convalescence, the fever having run its course. The physician who performed the autopsy considered the death due to the serum.

We must note that the true founders of this form of treatment have also grown skeptical as to its absolute benefits. Another writer[3] states: "The reports of the English and French journals of cures as a result of serum treatment must be looked upon with suspicion."

This brings me to a case unsuccessfuly treated by me and my medical counselors.

Mrs. ——, aged 25, primipara. Spontaneous birth after six hours, the whole labor being uneventful, save for a superficial tear of fourchette. Temperature and pulse normal and general condition favorable. As is my habit, I directed the nurse to use vaginal douches of water and formaldehyde twice daily. Up to the fourth day everything seemed favorable, when the temperature suddenly rose to 102.5 without an initial chill. I then immediately examined her and found nothing to which I could attribute this sudden rise of temperature. I immediately ordered a purge and a freer use of the antiseptic douche. The following day, the temperature still remaining high, I gave her an intra-uterine douche of formaldehyde and water and repeated it the following day and informed the family that a consultant should be called in. Her uncle, being a prominent member of the profession, was sent for, but as he was not at home his confrère, Dr. ——, came instead. About this time an exudate made its appearance on the abraded surface of the fourchette, and the nurse was directed to make frequent applications of peroxid of hydrogen to those parts. On careful inquiry I learned that the nurse employed by the patient had recently been attending a family with membranous tonsillitis and that she herself had but just recovered from the same disease. Characteristic of the "meddlesome women" she undertook to improve upon my treatment by applying large quantities of vaselin from an open jar on the abraded surface and into the vagina after each douche, without my knowledge, thus defeating largely the very object of the cleansing process. This fact, together with the knowledge of her recent experience with membranous tonsillitis, accounted, of course, for the source of sepsis in this case. On advice of Dr. ——, vaginal and uterine antiseptic douches were continued,[4] and the exudation continuing to extend up the vagina, clear to the fundus of the womb, Dr. Goodell's solution of hydrate of chloral, iodin and carbolic acid was applied to the parts involved twice a day for the purpose of destroying the membrane. Antistreptococcic serum, 10 c.c., twice a day, was injected for three or four days, producing some unpleasant local effect, the parts looking red, the integument raised and edematous, presenting a smooth shiny, pale-yellow surface, somewhat mottled with infiltration into cellular tissue. The temperature varied from slightly above normal to 104.5 and 105, without reference, as far as I could see, to the use of the serum. Either one or the other or both of the consultants saw her or were communicated with every day by telephone, and their efforts, as well as my own, were untiring, active and unremitting. Quinin and nuclein were given and laxatives as required.

Before the termination of this case Dr. ——, in a paper read before the Michigan State Medical Society, May 5, 1899, said: "I saw her on the fifth day after confinement. Her temperature was 104 and had been nearly that for 48 hours. A thick white membrane covered the surface of the perineal laceration and other abrasions of the vaginal wall. . . . Nuclein solution and quinin were prescribed. The next morning the temperature was normal and remained so until toward evening the next day, when it began to rise, and increased steadily until noon of the eighth day, when it registered 103."

The wide variation of temperature at short intervals characteristic of this disease was a marked feature in this case, from its beginning to its termination, ten weeks later, and these exacerbations of fever were not preceded by chills and fluctuation of temperature did not seem to bear any relation to the medication employed.

The temperature had varied from 101 to 104 during 48 hours. There were no vaginal abrasions or exudations except at the fourchette, but despite all treatment the exudation extended gradually up from day to day, involving the entire vaginal wall and cervix, till it reached, about the third week, the end of the uterine canal.

A marked feature in the case was a high temperature every seventh day from the first to the tenth week, when she died. At the first visit of Dr. ——, beside the treatment above mentioned, the nurse was directed to apply the peroxid of hydrogen, and he recommended Goodell's iodin, carbolic acid and chloral mixture to be applied if the exudation continued. Dr. —— visited her again the third day following his first visit and her symptoms not having improved and the exudation continuing, he applied the Goodell mixture to the abraded surface and injected the same into the uterine canal, and the vagina was packed with iodoform gauze and vaginal and uterine douches continued till about the thirteenth day, when the membrane ceased to form.

The diagnosis of streptococcic infection had been made and the antistreptococcic serum was used hypodermatically once in twelve hours, till three doses were given and after a short interval six more were given, making nine in all. Inasmuch as the nurse in attendance had just returned from a case of membranous tonsillitis it can not be denied that the infection may have been diphtheritic rather than simply streptococcic. We could scarcely suppose that so thick a false membrane could result from a simple streptococcic infection. It would rather suggest wound-diphtheria and would therefore require antidiphtheritic serum.

Though never having used the serum, I had but little faith in its virtues, but was encouraged in its use in this case by the consultant, who, in writing of it in connection with this case, says: "If we find that patients so virulently infected as this one was recover under its use, while others under usual forms of treatment, without its use, almost all die, there must be virtue in it. In some cases it works as positively as does the antidiphtheritic serum.[5] She is in excellent spirits, has no

1. Centralblatt für Bakt. u. Parasit, vol. xx, p. 173. "Researches on Antistreptococcus Serum."
2. British Medical Journal, 1896, p. 1285.
3. Encyclop. der Geburtshülfe und Gyn., 1900, p. 286.
4. The continuation of the uterine douches was repeated only on his advice, as, owing to conditions unnecessary to explain in this connection, all treatment recommended by him and his associate consultant was carried out.
5. This was written before the patient died.

pain, excepting after examination, has had no symptoms of systemic infection, having had no chill or sweating. Her temperature for the past three days has ranged lower, showing minimum of 98.5 F. and a maximum of 102.5." Mace[6] states that serotherapy has proved a failure and is rapidly being abandoned and that the Institut Pasteur itself has admitted the action of the Marmorek serum unsatisfactory.

The patient's appetite and strength and circulation kept good, and she looked cheerful, and neither she nor her friends could feel that she was very ill during the first few weeks of her malady. There occurred, early in the case from inflammatory action, a thickening of the left broad ligament and enlargement (though not marked) of the womb. Later the right broad ligament became involved, but its enlargement soon disappeared, under the persistent and thorough use of hot vaginal douches. The nineteenth day from the inception of the fever, the consultants thought they discovered evidences of pus in the left broad ligament, which I was frank to say I doubted.[7] Operation for the removal of pus was postponed for five days, when she was placed under ether and chloroform was given, and two or three attempts were made with a trocar to reach pus in the broad ligament through the vagina. This thorough exploration revealed no pus, and 26 days from this examination the patient was placed under the influence of chloroform and an abdominal section made. No pus was found, but of course the plastic inflammation of and about the broad ligament involved the Fallopian tube. The tube, slightly enlarged, was removed, but when laid open no pus was found. In a case so serious as that of streptococcic infection in the puerpera, no mind is so gifted as to see the end from the beginning, but it seems to me that it would require no superhuman gift to anticipate the result in this case. Fifteen days following this the patient died. A few days following the etherization and exploration with trocar for pus, on examination of the patient's urine I found it contained considerable mucus, blood and pus and other evidences of a well-developed case of acute nephritis, edema of her limbs, hands and face and different parts of the body changing, more or less, from place to place, being more marked in pendent portions, the lungs becoming somewhat involved and pleuritic effusion being present.

A drainage tube was left in the surgical wound of the abdomen and about three ounces of serum were removed through it twice a day until a day or two of her death, when, coming away spontaneously, it was not replaced. After the diagnosis of nephritis saline cathartics and digitalis were freely used. She died in a spasm from uremic poisoning.

We are prone to report our successes and especially if we can attribute them to means or fads not in general use by the profession, but it is no less our duty to record our failures as a warning to others.

Left to myself to treat another case like the one above described, I would not employ: 1. Antistreptococcic serum. 2. I would not administer ether. 3. I would not explore with trocar for pus. 4. I would not cauterize abraded surfaces to destroy exudation. 5. I would not make an abdominal incision during the course of the septic fever, unless the pus accumulation had become localized and demonstrated. 6. I would not make it then till after leucocytosis had been determined. 7. I would not subject the patient to the shock of any operation until the pus had formed and become localized and could be easily removed without severe shock to the system.

The fact that no pus was formed is not, in my opinion, due to the use of the serum, but to the frequent and persistent vaginal douches, eight gallons at a time, much of the time once in three hours, the douches being grateful and restful to the patient.

6. Obstetrics, June, 1899.

7. Patient had no chill, no severe pain in region of tubes, no reflex symptoms, vomiting, etc., no rectal or vesical irritation, no abdominal symptoms. Her appetite was good and she slept well. For those and other reasons I believed no pus had formed, the case being exceptional in that regard.

We all know how the kidneys are susceptible to disturbances during and following pregnancy, and especially must we note the deleterious effects of ether upon the kidney, so much so that many surgeons, especially in Europe, discard its use almost wholly as an anesthetic. So in case of an acute attack of nephritis following its use in such a depleted condition, can we not conclude, after knowing that a patient had during the whole period of pregnancy shown no disturbances in this direction, that the ether was the cause?

Hence, in such cases, where the patient is thus depleted, should we not hesitate, in view of the inhalation of ether having such a strong tendency to produce an acute congestion of the kidneys, especially as this form of congestion is almost always fatal? I would not have administered an anesthetic without first ascertaining, by an examination of the blood, if pus were present—the blood, if pus was present in the system, would show a marked leucocytosis, both absolutely and relatively, there being particularly a great increase in the polymorphonuclear leucocytes. There are two exceptions to this rule. Leucocytosis might not occur first where a pus cavity is walled off by adhesions, and second, in cases where the system was overwhelmed by the poison, for in these cases a negative chemiotases seems to be present, neither of which conditions would apply in this case, for the presence of pus during the active stage of the disease would be less dangerous than the danger of an almost certain septic infection of the peritoneal cavity, by an attempt at its removal by abdominal incision.

Besides the high blood pressure produced by the inhalation of ether being directly injurious to the kidneys, do we not in such a case of septicemia have special reasons for withholding it, in view of the well-known fact of such extensive destruction of the blood corpuscles in septicemia leading to a weakened condition of the walls of the small vessels, in many cases to extensive hemorrhages, both with the subcutaneous and submucous tissues; why then not into the kidney, producing in this way acute nephritis?

I would not, during the active stage of the disease, explore with trocar the broad ligament through the Douglas cul-de-sac for pus. I would not cauterize abraded surfaces to destroy the exudate, a product, not a cause of the disease. What physician of the present day cauterizes diphtheritic membrane to cure diphtheria?

I would not, during the progress of the fever, subject such a patient to the additional shock of an abdominal incision or any operation. Certainly I would not operate until the presence of pus was proven by blood test, if necessary, or the pus pointed and could be easily reached without shock to the system.

This brings me to the brief consideration of some cases that I have seen as a consultant and what seems to me to be the most rational treatment of them.

CASE 1.—I saw her Jan. 2, 1901. Age 21; occupation, housewife. Menstruated first when 16 years of age, regular every four weeks; last was ten months ago, duration 4 days—delivered by midwife, child six days old, character of labor was normal. This was her first child and she never had any abortions. Condition of patient when I first saw her: Duration of disease was four days. She had pain in the lower part of the abdomen and had a reddish discharge. Micturitions take place frequently, about every three hours. Upon examination large broken-down exudative patches were visible on the anterior and posterior vaginal walls and apparently extending into the cervical canal. A sound was passed for the purpose of diagnosis and a vaginal douche of bichlorid, 1 to 5000, was given.

Patient's temperature on my first visit was 106, pulse 140, respirations 24. This temperature fluctuated, the first day from 106 to 102, then to 105 and back again to 102; second day, temperature was 106, pulse 130, respiration 48; third day, temperature was 100, pulse 112, respirations 32; fourth day, temperature was 104, pulse 116, respirations 34; fifth day, temperature was 98, pulse 104, respirations 30. There was a daily fluctuation ranging from 103.4 to 99.8 for ten days following, when on the sixteenth day the temperature rose to 105 and fell the following morning to 100. This fluctuation kept on gradually decreasing until on the 22d day, when the patient's temperature reached normal part of the day and did not go above 101. At my first visit quite a large mass was diagnosed, involving left broad ligament, and three days later blood test showed marked leucocytosis, but no attempt was made at that time to explore for pus. Urine examination was negative. Pathologic examination showed streptococcic infection. General treatment was sponging with alcohol and water when the temperature rose above 103. Milk diet and beef juice; whisky was given every three hours. Strychnin sulphate gr. 1/60 once in three hours. Bichlorid douches 1 to 5000 twice daily. Bowels kept regular by laxative salines, enemas and occasionally calomel. At the end of six weeks from my first visit her temperature was but slightly above normal, and what fever she had I attributed to other causes than streptococcic poisoning. Fluctuation could be felt from the Douglas cul-de-sac to the posterior lateral aspect of the uterus on the left side. The pus having pointed I emptied the abscess by incision at this point, causing but little pain and no perceptible shock, from which time the patient progressed to a satisfactory recovery.

CASE 2.—I saw her Jan. 12, 1901. Age 20; married four years; occupation, housewife; menstruated first at 15 years of age; regular in character, period of four weeks; last was in the middle of September, lasted three or four days. Patient gives history that some time in last September she was curetted. Present illness dates from a few days following curettage, made because she was barren, and to overcome sterility.

January 12, patient's temperature was 97, pulse 160, respirations 32; on the same day temperature rose to 103.4. From 17th to 23d it fluctuated from 99.4 to 103.

The patient looked blanched, and blood examination showed marked leucocytosis. On examination of her vagina quite an enlargement was found posterior and to the right of the uterus, involving the broad ligament. The tumor was hard and I could detect no fluctuation. She was too feeble to undergo any operation had one been desirable. Treatment in general was the same as that employed in Case 1, except that bichlorid was not used in douches. From this time on temperature fluctuated from normal to 103, till on April 8 the fever had entirely gone. At this time fluctuation being found just to left and posterior to cervix I removed the pus by a free incision and the patient went on to a satisfactory recovery.

I report the last two cases mentioned above to show the treatment, which not only in these cases, but in quite a number of others in my experience, most satisfactory recoveries followed, though the disease was somewhat protracted, which is usual in such cases. The profession being ever ready and anxious to conquer disease, there is constantly being evolved, through the application of intellectual experiment and money, new remedies to accomplish this end. Diphtheria, over which science has achieved such glorious victories, is an example of a disease which has been arrested and humiliated by the application of attested scientific methods. But the admitted virtues of anti-diphtheritic serum may, and I think has, stimulated the over-credulous and enthusiastic to use a variety of serums of more than doubtful utility, if not absolutely harmful, as was demonstrated in the use of the Koch lymph for the cure of tubercle, and I think I may say in the use of the serum in puerperal streptococcic poisoning in the puerperium.

SURGERY OF THE LIVER.

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It is only within recent years that the liver has received the attention of surgeons. Operations upon this organ were dreaded on account of the profuse, at times uncontrollable, hemorrhage which followed the cutting into the very vascular organ. This was observed in cases of injury of the liver, where the surgeon often was helpless in trying to check the bleeding by methods which would be applied in other organs.

Another reason why surgeons hesitated to remove large portions of the liver was the uncertainty of the physiological after-effects in the destruction of a large part of the liver substance. The knowledge on this subject was very imperfect, and when a surgeon was confronted with a case requiring resection of a large portion of the liver, the picture of acute yellow atrophy and its fatal results stood before him and naturally he was not very enthusiastic.

Spontaneous healing following injuries resulting from accidents of the liver substance first suggested to the surgeons how to deal or attempt to deal with such wounds.

In 1870 Bruns treated a gunshot wound of the liver by resection of the lacerated portion, and the patient recovered. In 1886 Linz removed a solid tumor of the liver, and though the patient died the feasibility of an operation on the liver substance was proven. Since that time, a number of operations on the liver substance have been reported, the majority being with fairly good results. In studying the details of these reported cases, we note that they were not well-planned operations, but inventions of the moment, because the conditions requiring the operations were discovered accidentally after opening the abdomen, either after a wrong diagnosis or a probatory incision in doubtful diagnosis.

There having been no definite technique or rules in the removal of tumors from the liver, we can readily understand that the methods were quite primitive, such as removal of the growth by a finger-nail or a spoon.

A step forward was taken by the very interesting and important experiments on animals by Gluck, Tizzoni, Griffini, Podvyssotski, and especially by Ponfick and Kahn. They have all proven that on animals a resection of a considerable portion of the liver is possible and compatible with life and that the damage is soon repaired. Ponfick, for instance, was able to remove two-thirds of the liver without causing the death of the animal. These experiments and very favorable results encouraged surgeons to work on the human liver. All that was then needed was a perfect method of controlling the treacherous hemorrhage of the liver and the two objections mentioned would be overcome. Work in this direction was carried on with equal zeal, of which the publication of Kausnetzoff and Penski, and of Auvray and Terrier, published in the "Revue de Chirurgie," 1896 and 1897, are the most important ones. Other individual observations and operations by reliable surgeons were reported.

The methods so far advocated by different authors may be summed up as follows:

1. Removing the liver tissue by cautery alone.—Jacobs.

2. Cutting away the pathologically changed tissue following the cut with the thermo-cautery.—Bruns.

3. Curetting and tamponnading afterwards.—Mikulicz and Schmidt.

4. Cauterization and ligature of some vessels which continued bleeding after cauterization.—von Eiselsberg. Tuffier found this method reliable, as the vessels can withstand a good deal of stretching. Keen operated on a case by this method with good success.

5. Ligature *en masse* with elastic material before removing the tumor.—Lucke and Israel. A modification of this method is to leave the elastic ligature until the danger of secondary hemorrhage has passed, and securing the stump, preventing the slipping back by long needles, a method well known formerly in the extraperitoneal treatment of fibroids.—Sklifassovski, Rosenblatt, Bastianelli.

The Suegireff method, i. e., the use of hot air or steam as a hemostatic, has been abandoned, for the reason that it was not possible to apply it to small areas. It produced a cooking effect on the surrounding structures, even if they were well protected.

Kausnetzoff and Penski have made a great many experiments on animals, from which they deduct the following conclusions:

1. Lightly drawn ligatures are of no value.

2. The intraperitoneal treatment of the stump after resection is preferable to the extraperitoneal.

3. Blunt needles do less harm in sewing the liver than sharp needles.

4. Gradual tightening with elastic material is thoroughly hemostatic.

5. The vessels resist a good deal of weight and pressure, and ought to be tied individually.

6. The omentum should not be used to cover the liver stump, as it does not increase the hemostatic effect.

7. A transverse incision to reach the liver is preferable to any other.

Keen and others have collected and tabulated the cases in detail, and given their own experiences. Remarkably good results were obtained in most of the cases, but from the perusal of the descriptions it was evident that there was still no reliable method of dealing with one of the greatest dangers of these operations, i. e., the hemorrhage. Even if Dr. G. V. Segale, of Genoa, considers the problem solved by the ingenious method he has devised, it seems that such is not the case. More experiments and observations will be necessary before we have reached a faultless method.

My attention was called to this subject by a case which occurred in my practice in 1892. A boy, about 10 years of age, accidentally shot himself with a toy gun, 22-caliber. In trying to hide the weapon underneath his vest, he accidentally pulled the trigger and the bullet was discharged, entering his right epigastrium below the costal arch. The bullet took a downward course, penetrating the liver, perforating a few loops of the intestine, finally entering the bladder, and by contractions of this organ the bullet was passed halfway down into the urethra, blocked the same, causing stranguria. I saw the case a few hours after the accident. The fact that the boy had been shot had not been known to the physicians or the parents up to that time; their attention was directed to relieving the stranguria and collapse.

Upon opening the abdominal cavity, we found it filled with fresh blood and coagula. The first injury discovered was the lacerated border of the liver, which still bled freely. A compress was tightly kept over it by an assistant, which temporarily stopped the hemorrhage, while we proceeded with the examination. When the intestine and the bladder had been sutured, the compress was removed from the liver, and we found that the hemorrhage had nearly stopped. I was inclined to resect the ugly torn substance, being afraid of infection from it, but I refrained from so doing for fear that a new hemorrhage would be started by a fresh cut, and perhaps be fatal to this already very anemic boy.

Further experiments on animals convinced me that the liver substance removed in small pieces from the border of the liver may safely be sutured without causing the death of the animal. Subsequently during my Cook County Hospital service I was able to verify this, especially in the case of a stab wound through the liver. In this case I put several sutures into the liver substance, and obtained a good result. I desire to report another case, that of a young woman, who came under my observation in 1894, in whom a diagnosis of inoperable cancer of the stomach with metastatic tumors of the liver was made by a leading surgeon, and operation refused. The diagnosis seemed to me doubtful, and I made an exploration. I found a tumor the size of my fist at the anterior border of the liver, yellow in color, glistening and surrounded by a somewhat congested area. The stomach and intestines were not involved. I was very much tempted to remove it, on account of its favorable location, but the first small incision made into it caused me to stop, on account of the profuse hemorrhage; I hastily closed it with a few sutures. I was afterwards glad I had not removed the tumor, because while manipulating the liver I discovered that there were smaller lumps on the upper and posterior surface of the same, and I suspected that I had to deal with a case of "Multiple gummata" of the liver. My suspicion was verified by a rapid disappearance of the tumors by vigorous antisyphilitic treatment.

In 1896 I again had occasion to observe a tumor of the liver which seemed to be a promising case for resection, but having had no definite method of technique, I refrained from operating. I then began to experiment on animals, with the object of devising a method which would promise a good result in this case.

Where lay the fault with the methods already in vogue? What particular danger was to be feared in the operation in question? First of all, I concluded that the wound should not be drained. Drainage introduces many dangers. For this reason it was essential that absorbable suture material should be used. Second, the hemostasis should begin even before the cut is made into the liver substance. If we begin to enucleate a tumor and try to ligate or pack as we go on, the hemostasis will be only partially checked. If we apply the cautery, we darken the tissues and can not distinguish pathologic from normal tissue, because when burned they both look alike, and we are liable to leave some of the pathologic tissue behind.

Catgut or silk without any support cuts through the liver structure with great ease, and therefore is not practical. This was proven by many investigators who had worked on this problem before I did.

It was therefore necessary to find some material for the support of the ligatures. The most suitable for this purpose seemed to me to be decalcified bone recommended by Professor Senn for similar purposes. We began to use the same in oblong pieces, perforated at either end with a small punch, passed the catgut through these holes, and tied them in the manner of a quilt suture. The method was identically the same as

that described by Dr. Segale, with the exception that he used ebony or ivory rods or tubes. These are not absorbable, or only partly so. His method is the following: He uses small beads of ebony or ivory, which are hollow, and fit one into the other at the ends, and are threaded with catgut so as to form a small flexible rod. The material was chosen because it lends itself to disinfection, and the bead-like arrangement favors encapsulation of each bead. The technique of the operation is as follows: At the boundary of the lobe of the liver, which is intended to be removed, and along the transverse line there are passed several such loops of rods, so as to compress a triangular piece, the base of which is directly towards the operator. The string is tightly drawn and knotted, and then the tissue resected. The secondary hemorrhage is thus avoided, and intraperitoneal treatment of the stump possible. The catgut is absorbed, the rods break up into their small components, which are then encapsulated by connective tissue. Segale believes to have solved the problem by this method.

With the difference of the material—his being ebony or ivory beads, ours decalcified bone plates—the methods used in our experiments were nearly the same, but in my cases I found on postmortem on the animals local abscesses around the partially broken-up decalcified bone. These were firmly surrounded by adhesions to the stomach and intestine. This, of course, was undesirable, although such abscesses and even the unabsorbed suture material usually break into the intestine and heal out; still there were dangers in this method of healing; for, strictures, ulcers and other unfavorable sequelæ might result, and consequently I advised the use of absorbable material in the abdominal cavity. If, for some reason, silk had to be used, it should be used in interrupted sutures, so as to make the eliminative process easier.

I was about to abandon my experiments, when upon the suggestion of my brother, Dr. Joseph C. Beck, to utilize living tissue from the abdomen of the animal for the support of the sutures, I renewed them. The method was carried out as follows: From each border of the incision into the abdomen we slit up a broad band, including the peritoneum, the fascia, and in some cases also the muscle. This strip was left attached at one end to the abdominal wall. These strips were used as supporters for the suture material by encircling the liver with them where the sutures were intended to be placed, and the catgut sutures were passed through these strips and tightly drawn, in the same method with which the decalcified bone plates were used. The results were most gratifying and at a November meeting of the Chicago Medical Society, in 1898, I exhibited some specimens of these experiments.

After November, 1898, I discontinued the experiments on the liver, and have had no opportunity to give the subject my attention, until of late, when a case occurred in my practice which proved to me that after all we had not yet solved the problem of resection of large portions of the liver. This case is in many respects unique, and illustrates many points of pathology and technique in the operation. The following is a detailed report of this case:

F. K., 20 years old, porter, remembers having had a prolonged fever when he was a very young boy; the nature of this he has never ascertained. At the age of 6 he had mumps. At 18 he suffered from gonorrhea, made a quick recovery, but never had a syphilitic infection.

About five years ago the present illness began. He received a severe kick in the abdomen in an altercation with a companion. The pain was so severe that he had to go to bed and remain there several days. The pain was localized in the left upper part of his abdomen for several weeks, disappeared for a time, but returned as soon as he resumed work or lifted anything heavy. At such times there appeared a swelling in what he called "a weak spot," which subsided after application of turpentine and reappeared again. After several such experiences he noticed a gradually growing tumor in the left upper abdomen, which caused shortness of breath, especially in lying down. A cough with expectoration of thick mucus set in and annoyed him greatly. Of late he had been feeling miserable, declined in weight; his temperature varied, sometimes below, sometimes above normal. He lost his appetite and his bowels were very irregular. When offered an operative interference a few weeks ago, he declined, but now he begs for relief, even at the risk of life.

Status on Admission: Tall, thin, colored man, with normal conditions of head and face, slight bronchitis of both lungs, normal conditions otherwise of lung and heart. While standing we noticed a bulging beginning at the lower anterior chest wall of the left side at the height of about the 6th rib, becoming more and more prominent in the epigastrium, being pear-shaped in contour. In the recumbent position the mass which forms this prominence becomes more visible in the epigastrium. A moderately marked resistant, globular hardness are the characteristics of this tumor, which does not show fluctuation on any part. It is slightly movable from above downward, but seems to extend under the arch of the ribs and also slightly movable from side to side, though not to a great extent. The percussion shows that the hepatic dulness passes directly into this tumor; that the hepatic dulness on the right side does not extend as far below as normally; that the tumor extends about two inches below the umbilicus; on the back the dulness begins in the 6th intercostal space and reaches down as far as the line of the third lumbar. Otherwise the abdomen seems normal.

The patient has a temperature of 101.6, pulse 96. He coughs considerably and expectorates a yellowish, tenacious sputum. He is highly dyspneic. There is pain but no tenderness. Urine shows trace of albumin; otherwise normal.

Diagnosis: A tumor of the omentum, tumor of the stomach, tumor of the pancreas, or of the left kidney, tumor of the spleen, were the possibilities. I did not think of the tumor of the liver because no symptom pointed to this organ. The greatest probability seemed to be a pancreas or omental growth.

Operation: Anesthetic was quite difficult on account of the bronchitis and dyspnea. An incision was made over the highest prominence, in a line parallel to the median, of about six inches. After exposing the growth it was found that the same was a tumor of the liver. The spleen was small; the left kidney normal and in normal place; pancreas normal, but the stomach was very much out of its normal place, being grown into the tumor so that it appeared half buried with a small curvature in the lower surface of the growth. The first act of operation consisted in the freeing of the stomach from its position. This procedure was slow and very tedious, the adhesions being firm and bleeding. Finally, I succeeded in separating the stomach, but not without having denuded its upper wall of a portion of peritoneum and muscle. The defect was sutured, whereupon the tumor became free. An examination of the tumor showed that it was of the size of a man's head, more or less pear-shaped, passing with its narrower portion into the normal liver tissue at about the gall-bladder, or slightly beyond. The normal right lobe was so small and flabby that at first I thought of a situs inversus, which idea, however, was disproven by the spleen being in normal position. The tumor was brought outward from the abdominal cavity down to normal liver tissue. For this purpose the gall-bladder had to be slightly separated, which caused a slight bleeding. Being positive that all the pathologic tissue was outside of the abdominal cavity, I proceeded to exciude by elastic ligature. This method was the only one available for this kind of tumor. We were not prepared to find this tumor, and had not planned

a method of procedure. Consequently, most of the apparatus for exclusion and separation of the tumor had to be improvised. At first a broad band of iodoform gauze folded four times was placed around the stump, which was then tightly constricted by a rubber catheter, No. 14, Nélaton, and held by an artery forceps. A second band of iodoform gauze with another constricting Nélaton catheter was applied about half an inch above the first, and in order to prevent the stump from slipping into the abdominal cavity, two hatpins furnished by one of the nurses improvised the apparatus necessary to prevent the retraction of the stump. Then the abdominal portion of the liver was carefully surrounded with draining gauze and closed as far as possible to prevent prolapse of bowel or other abdominal contents. The tumor beyond the second constricting band was then resected, leaving just enough tissue to make it impossible for this band to slip off. There was absolutely no hemorrhage from the stump after the resection, proving that the constricting bands were tight enough. This completed the operation. Figure 1.

Post-Operative Notes: The operation had lasted 1 hour and 20 minutes. The patient returned in good condition. There was slight irregularity of pulse, but no considerable shock. He

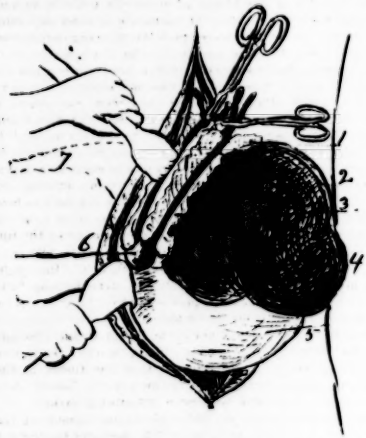

Fig. 1.—Shows the relation of tumor (4), stomach (5), and gall-bladder (6), the size of tumor about 2-3 of liver, two elastic ligatures (1 and 2), over gauze bands (3), leaving the gall-bladder within the healthy side; 7, small right liver lobe.

received a little cracked ice by mouth, but was fed entirely by rectum. Bowels moved slightly every day through the enemata. Temperature was from 101 to 102 continuously; the pulse 138 to 140. There was some oozing from the abdominal cavity during the first day, but on the third day, when the original dressing was removed, the hemorrhage had entirely stopped. A considerable odor from the gangrenous stump and a profuse malodorous discharge made it necessary to apply a considerable amount of orthoform. On the fifth day one of the rubber constrictors was removed. On the eighth day the second constrictor was removed, also the transfixing pins and a large part of the gangrenous stump was snipped off. About this time a considerable discharge of bile set in, apparently from large ducts, which were laid open near the line of demarcation. Firm adhesions of the healthy stump to the abdominal wall had formed by this time. The symptom, however, a high temperature, at times as high as 104, remained unexplained inasmuch as there was no symptom of intra-abdominal inflammatory condition. Inasmuch as the patient had a cough and expectoration, we were inclined to think of tuberculosis, but the repeated examination proved it to be negative. Finally the fever went down, and on the 16th day the patient was allowed to sit up in bed. On the 27th day he was moved into a chair; on the 34th day he was allowed to walk around. At this time the abdominal stump of sloughing liver had almost dwindled down to the size of a walnut and was surrounded by healthy granulations.—Fig 2.

Twenty days after the operation a suppuration from the right ear set in, which explained to us partly the fever of the patient. Several weeks after the operation the patient was able to go before the Chicago Medical Society to be demonstrated. At this time the abdominal wound was almost closed. The examination of his liver showed that the right lobe gave about twice as large an area of dulness as before the operation, indicating that a restoration of liver had taken place. For some time after, the patient gained, but about the middle, or toward the latter part of November, he had a recurrence of fever, pain in the ear, and some cough again. Inasmuch as his liver was entirely healed up, I inclined to the belief that this temperature was due to tuberculosis of his middle ear, and in order to give him the benefit of a better climate, he went to the South. I receive

Fig. 2.—Thirty-four days after operation.

a letter every week informing me as to his condition, which thus far is improving.

The specimen was immediately brought to the laboratory of Professor Zeit, who was inclined to pronounce it, from the macroscopic examination, an angioma. Microscopic specimens were prepared and showed, besides the large blood-filled cavities, which make up the bulk of the tumor, small areas of positively new-formed tissue of glandular character; so that we thought we had to deal with a tumor of angio-adenomatous character. Dr. Max. Herzog kindly examined some of the slides and believes the tumor to be an angioma. Microscopically it appears to be composed of large cavities filled with coagulated blood between small islands of liver tissue and connective tissue. The size of the tumor was that of a child's head and one could say it amounted to about two-thirds of the whole liver—Fig. 3.

The reason why I did not in this case employ the method which proved so successful in my experiments on dogs was that there was too much temptation to treat this tumor extraperitoneally. The tumor was so large that I could make it pediculated, but the patient was

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exposed to great danger of infection. There was sufficient opportunity for it. A vast gangrenous surface, resorption of foul material for weeks, drainage of bile and danger to the life of the patient—all these could have been avoided had we used the intraperitoneal method. It was by mere accident that the patient escaped these dangers.

This case again prompted me to conduct more experiments on animals, which I desire to report in this paper.

No. 1.—A medium-sized dog was chloroformed and through a longitudinal incision in the region of the gall-bladder a lobe of the liver was brought out. Several sutures of silk were inserted, starting with the fascia, then the peritoneum, then through the liver and again in the opposite side through the peritoneum and fascia. In this way the liver was practically clamped between the two abdominal walls. The protruding portion of the liver was then amputated. The constriction of

Fig. 3.—Slices of tumor proper, showing cavities with coagulated blood.

the silk ligatures, which had been previously tightened, prevented bleeding from the cut surface completely. In order to prevent retraction of the stump, before firm adhesions would be produced, all tissues including the skin on both sides were transfixed by two long pins crossing each other. The superficial fascia and the skin were then separately sutured over the stump. This dog unfortunately died from peritonitis forty-eight hours after operation. On postmortem examination there were no signs of hemorrhage, but no adhesion had taken place, probably on account of the infection of the peritoneum. To demonstrate the method of this operation, I have prepared a schematic drawing, No. 4.

No. 2.—A large-sized animal was chloroformed and an operation in every respect corresponding to the one of No. 1 was performed Nov. 4, 1901, by Dr. Hecht. The dog recovered, and two months later, Jan. 9, 1902, a second operation was performed by myself. A transverse incision along the border of the lowest rib was made. The old scar contained a stump of the liver. The stump was completely surrounded by an adhesion of omentum, as though it had been soldered to the abdominal wall, but no intestines were adherent. The transverse incision permitted lifting out of the abdominal cavity nearly one-third of the remaining portion of the liver. A strip of gauze was placed around it, and slowly constricted, but nevertheless it cut through the substance of the liver on one side, and resulted in a slight oozing, which I thought would stop without any suturing. The abdomen was closed, as in the previous two cases, but the dog died the following day from the effects of hemorrhage, which was the result of oozing from the constricted portion.

No. 3.—Operation was same as in No. 1. The animal died from the effects of sepsis, but there was no evidence of any hemorrhage after the operation.

No. 4.—A medium-sized animal was chloroformed, and an attempt was made to remove the two lobes in a manner similar to No. 1. In pulling the liver upwards, however, a rent was produced in the central portion of the organ where the lobes originate. This was sutured by catgut sutures, with apparently a satisfactory result. The abdomen was then closed in the usual manner. The animal died the same day from the effects of hemorrhage from the rent in the posterior part of the liver. No signs, however, of hemorrhage were present in the stump, which was sewed into the abdominal wall.

No. 5.—Medium-sized female dog was chloroformed, and an operation in every respect like No. 1 was performed. No infection took place in this case, and the dog recovered and lived several weeks. On postmortem there were no evidences

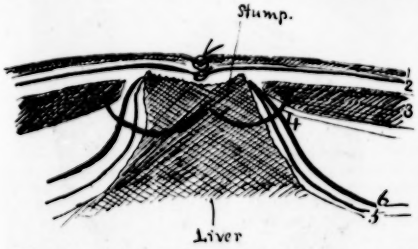

Fig. 4.—1, skin; 2, S, fascia; 3, muscle; 4, suture of liver fascia and peritoneum; 5, peritoneum; 6, deep fascia.

of hemorrhage; simply the adhesions of omentum around the portion which entered the abdominal wall.

No. 6.—An operation in every way like No. 1 was performed, with apparently complete hemostasis. Before closing the abdomen, however, I decided to make another resection deeper down, with the preliminary compression of a gauze bandage, as I had done in the case No. 2. In doing this the liver substance was again torn by compression with the gauze, and bled freely, leaving an irregular, lacerated wound of the liver running backwards. The flaps were not long enough to encircle the posterior part of the liver, and it was impossible to stop the hemorrhage, and the animal died from the effects of hemorrhage the same day.

No. 7.—In this animal the same experiment was made as in No. 6. In this case, however, large and broad flaps were secured. No difficulty was encountered hereby. The right part of the liver was almost entirely removed, and controlled with the compression and suture, which was supported by the flaps. This dog recovered, and was killed three weeks later, showing that the hemorrhage can be prevented by the method pursued in these experiments.

The lesson taught by these experiments is that it requires broad and long flaps of fascia and peritoneum in cases where a large portion of the liver is to be removed, using the gradual slow constriction of the organ before placing the sutures. From my observations on

the cases of the human, and experiments on animals, I would draw the following conclusions:

1. Liver tissue of considerable size may be safely removed by previous anemization of the part which is intended to be removed.

2. That for the support of the ligatures living tissue from the same animal, preferably the fascia and peritoneum from the abdominal wall, is best suited.

3. That the intraperitoneal or the intraparietal method is preferable to the external method.

A CASE OF INFANTILE CEREBRAL PALSY, WITH AUTOPSY FINDINGS.

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AND
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The lesions found at autopsy in old infantile palsy cases are variable. The findings are for the most part porencephaly (more frequently pseudo-porencephaly, often mistaken for porencephaly), small and indurated convolutions, single or multilocular cysts and microgyria. There may be but little or no evidence of the initial cerebral lesion. In the great majority of cases, however, there is usually some non-development of the cerebral convolutions in which the whole hemisphere of the side involved often unequally participates.

Fig. 1.—Cerebral hemispheres immediately after removal from the skull. The frontal lobes are located anteriorly. The left hemisphere is seen to be much smaller than the right. *a*, porencephalic areas in left hemisphere still filled with fluid. *b*, "Bear claw" bony formation in dura mater. *c*, Depression between right ascending frontal and middle frontal convolutions. *e*, Similar depression and break in right ascending parietal convolution. *f*, Fold of the dura mater. *d*, Border of the larger (left) hemisphere of the cerebellum.

The cerebellum of the same side or of the opposite side may also enter into the atrophy or non-development. The cerebellar lesion occurs on the same side if the pressure of the early lesion (hemorrhage) was great, or on the opposite side if the lesion resulted in large surface destruction or secondary atrophy of the hemisphere. There are, however, many varied changes present in individual cases; for instance, the calvarium and fossæ may be involved in the lesion. There may be low-grade formative connective tissue cysts, calcareous plaques, internal or external hydrocephalus, in which latter condition the degree of cerebral atrophy is secondary. The degree and extent of the unilateral lesion is often shown in motor and special sense defects. However, very frequently the clinical symptoms fail to give an adequate idea of the site and extent of the lesion. This is due to the fact that the symptoms which follow injuries in the silent regions are unknown, as is also the degree of compensation possible in the unaffected areas in the same hemisphere and the extent of bilateral representation of cerebral processes in the cortex.

An interesting case of infantile cerebral palsy in which epileptiform crises developed and in which multiple lesions were found to exist at autopsy is as follows: M. E. C., aged 29, unmarried, was born at term; labor normal. There was no disease in infancy until the onset of infantile cerebral palsy at 2 years of age. The palsy was supposed to be caused by fright. It was attended by "fever, convulsions and great prostration for several days." The whole right side was paralyzed. In the course of several years she regained considerable use of the leg, notwithstanding the occurrence of marked atrophy and maldevelopment of the muscles and bones of the right arm. The arm was entirely useless and developed the usual condition of spastic rigidity. Lack of development was marked and the extremity always remained infantile in appearance as shown in Fig. 7. At the age of 6, epileptiform crises appeared. They began in the right face and shoulder muscles. For the first seven years the crises were confined to that side without loss of consciousness. At 13 the attacks became typical grand mal, with right-side order of invasion, and an epigastric aura. For the past two years, two or three attacks occurred daily. The patient was feeble-minded although able to read and write and do ordinary housework. Old cicatrices were present on both cornea and chronic conjunctivitis was present, yet the corneal scars were not central and interfered but slightly with vision.

Fig. 2.—The small left cerebral hemisphere is shown against the larger right cerebral hemisphere. The small atrophied convolutions of the left hemisphere are shown with porencephalic areas collapsed. *a*, Porencephalic areas in parietal region. *b*, Porencephalic area in temporal region. *c*, Large left hemisphere of cerebellum; the relative size of it and the left cerebral hemisphere is apparent.

Ophthalmoscopic examination was negative. There was bilateral paralysis of the levator palprebræ with marked ptosis on the right side. All the deep reflexes were greatly exaggerated in the paretic parts. Several periods of serial attacks occurred during the past year. A series of attacks which occurred April 5, 1901, was very exhausting and temporary loss of speech followed each attack. When free from seizures the speech was normal but slow and drawling as commonly found in the mentally deficient. All seizures began and ended on the right side (face and shoulder), the head was always turned to the right. Occasionally, after the right side contractions ceased and the convulsion had apparently ended, the left arm and leg showed a series of three or four sharp clonic contractions.

On July 4, 1901, the patient passed into a condition of stupor and delirium constituting the status equivalent. The cardinal curves of this fatal coma are shown

in the graphic chart. Patient died of the status equivalent on July 9.

PATHOLOGIC ANATOMY OF THE CASE.

The autopsy was necessarily postponed until 30 hours after death. The body was well nourished; rigor mortis was marked. There was no asymmetry of skull or face. The right upper extremity was small, ill-developed and presented marked contractures. Although the right lower extremity was poorly developed, atrophy and contractures were not so marked as in the right arm. All the muscles of the right side were small and showed poor development.

The scalp was not excessively adherent to the skull, but was extremely thick. The skull was greatly thinned, especially in the left parietal and frontal regions. The diploë was entirely obliterated in those parts of the cal-

Fig. 3.—The relative size of the two cerebral hemispheres is shown; frontal aspect.

carium. The dura was not excessively adherent to either the skull or the pia, and its sinuses were free. Adjacent and parallel to the superior longitudinal sinus and near its anterior extremity was found a "bear claw" bony formation firmly attached to the inner surface of the dura. It was triangular in shape, about two inches in length and partially covered the convexity of the left frontal region. The dura was somewhat thickened in some areas on the right side, while the left presented a well-formed membrane over its internal surface. There were a few small calcareous bodies in the dura. The

Fig. 4.—View of the two hemispheres of the cerebellum, showing their relative size. *a*, Small right cerebellar hemisphere. *b*, Normal left cerebellar hemisphere. *c*, atrophied convolutions of left cerebral hemisphere.

pia was considerably thickened, especially in the occipital and frontal regions of the left side, and quite adherent to the brain surface. There was considerable edema of the pia-arachnoid over the whole brain surface and many opaque areas in the pia, especially on the left side. The velum interpositum was considerably thickened. The vessels at the base presented the following abnormalities: The left anterior cerebral artery was very small and rudimentary. The anterior communicating artery was very long (three-quarters of an inch); the cerebellar branch of the basilar artery was very small on the right side.

The brain mass filled the cavity of the skull fairly well; but on attempting its removal, the left cerebral hemisphere was so greatly softened that the ventricular wall and certain pseudo-porencephalic areas on the left side were still somewhat distended. Figure 2 shows these areas collapsed and gaping, certain ones being indicated (*a*), but the largest of these cysts was located in

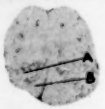


Fig. 5.—Drawing of section of the medulla through the inferior olivary bodies, showing atrophy of left inferior olive, *a*, and left posterior pyramid, *b*.

Fig. 6.—Drawing of section through the cervical cord, showing sclerosed area in region of right pyramid, *a*. The entire right side of the cord is smaller than the left.

the superior parietal region and is not shown in the cut. The relative size of the two hemispheres is shown in Fig. 3.

Weight of brain without pons and medulla was 586 gm., left side 85 gm., right side 501 gm. The convolutions of the entire left hemisphere were very rudimentary (microgyria) as shown in Figs. 2 and 3. Those of the parietal and occipital areas were especially small

Fig. 7.—Infantile right arm.

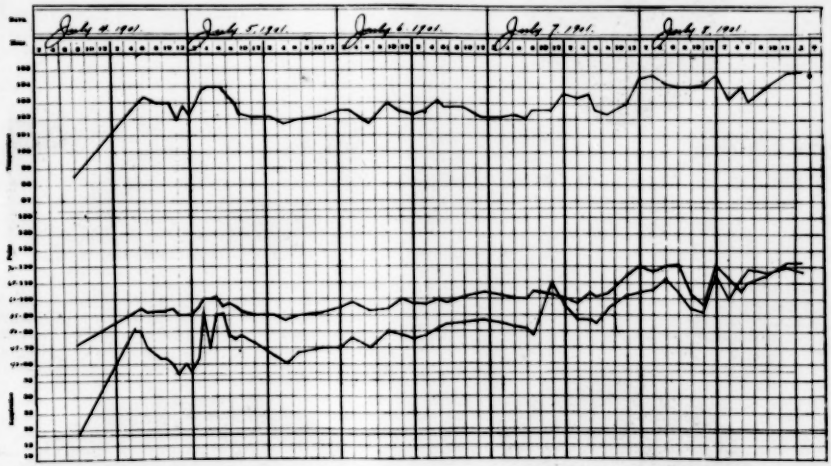
(knife-blade-like) and of diminished consistence. There were two convolutions in the occipital region and one in the temporal that still showed a cortical formation, but both were very small and the cortex was very thin and rudimentary. At the juncture of the Sylvian and Rolandic fissures there were several convolutions also

Figure 8.

that showed a rudimentary cortex. The entire parietal region of the left side was pseudo-porencephalic. There were two large cysts, each about the size of an English walnut, in the upper parietal region. They are shown by the fulness indicated (*a*) in Fig. 1, and the gaping areas (*a*) in Fig. 2. There was a large cyst also in the upper

temporal region of about the same size but somewhat multilocular (Fig. 2, *b*). There were many small porencephalic cysts scattered throughout the parietal and temporal regions. The lateral ventricle and the pseudoporencephalic areas are completely collapsed and the left hemisphere appears as an undeveloped mass. The left lateral ventricle was very large in comparison with the right and its ependyma over the basal ganglia was very granular.

The right cerebral hemisphere was large in comparison with the left, the convolutions being large and coarse. Between the superior and middle frontal convolutions and at the point where they join the ascending frontal convolution there was an unusually large and gaping sulcus as shown in Fig. 1, (*c*). There was also a decided break in the ascending parietal convolution which gave rise to another gaping sulcus (Fig. 1, *e*). The sulci over the entire right cerebral hemisphere were wide and shallow and the convolutions coarse and rounded. The cortex appeared of normal thickness and



appearance throughout this hemisphere, but the brain substance was somewhat congested.

The basal ganglia of the left side were very greatly reduced in size, especially the optic thalamus, which was a mere nodule. The lenticular and caudate nuclei were larger in proportion than the optic thalamus, but were, nevertheless, small. The cornu ammonis was small and greatly sclerosed. On incising the basal ganglia, the internal capsule appeared very rudimentary, appearing as a thin narrow line throughout its entire extent. The basal ganglia and the internal capsule of the right side appeared normal.

The cerebellar hemispheres were very unequal in size, the right being much smaller (Fig. 4, *a*) and weighing 57 gm., while the left hemisphere weighed 77 gm. The substance of the right cerebellar hemisphere was of greatly increased consistence, sulci shallow, convolutions small and arbor vitæ almost absent. Of its interior ganglia the dentate nucleus was still definable. The right cerebellar peduncles were greatly reduced in size, being about half the size of those of the opposite side.

The medulla was very asymmetrical. The pons appeared very narrow transversely, and was much shrunken on the left side. The left crus above was reduced in size and the pyramidal region below was very rudimentary (Fig. 5, *b*). The left olive was very small compared to that of the opposite side; otherwise the tegmental portion of the medulla on the two sides appeared about equal.

The base of the skull was markedly asymmetrical; the left anterior fossa (Fig. 8) was relatively shallower and more rudimentary in its cavity development. The left middle fossa was also smaller and of lessened capacity compared with that of the right. The superior occipital fossæ for the cerebrum were slightly asymmetrical. The capacity of the left was uniformly less in all its dimensions, while the inferior occipital fossæ for the cerebellar lobes were markedly asymmetrical. The right fossa was little more than a continuation of the basilar groove, which was S-shaped. The left fossa was twice the usual size.

To summarize the points of interest in the case: We have here a very pronounced case of infantile cerebral palsy, beginning at 2 years of age, and later resulted in severe epilepsy. Mental impairment was not marked; speech and the special senses were intact and normal. The cerebral lesions were probably produced by venous thrombosis of surface veins and secondary hemorrhage resulted. This in turn caused more or less complete but asymmetrical atrophy of the entire left hemisphere (microgyria, cystic degeneration and pseudo-porencephaly). Secondarily, the cerebral lesion caused mal development of the whole right cerebellar lobe and extreme atrophy of the left thalamus and inferior olive. The cranial fossæ at the base also participated in the pathologic condition most remarkably for an extrauterine lesion. Their arrested development corresponded in location and extent with the brain masses which each contained.

MANAGEMENT OF THE UMBILICAL CORD.*

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The cutting of the cord is the first surgical operation to which most human beings are subjected and an operation to which all must submit. The management of the stump during its separation from the body and the care of the ulcer subsequently formed are surgical procedures upon which depend the health and perhaps the life of the infant. If the wound be improperly managed so that infection results the child comes into serious danger. Navel infection is indeed one of the greatest dangers to which the newborn is exposed.

This surgical operation has been done since time immemorial. It must also be performed by the lower animals. It was done for centuries and ages before there were surgical principles to determine its technic. It is done to-day in many, perhaps the majority of cases, by those who have no knowledge of surgical principles.

Yet in some way or other babies have generally overcome the dangers of hemorrhage and infection of the stump of the cord just as they have overcome the measles and chicken-pox and the other infantile diseases that overtake them a little later in life. Nature's protective arrangements provided for by natural selection in the ages of development are generally sufficient to overcome or ward off the dangers that confront the newborn. It is probably true that Nature's arrangements are more efficient with races in a state of nature than with highly civilized mankind. Just as plants cultivated in glass houses are not as hardy as those that grow out of doors, so people that bathe daily, live in evenly heated houses and protect themselves carefully with clothes are less capable of resisting hurtful influences than dirty and naked savages.

Nature's methods of ridding herself of offending matter and healing wounds are sloughing, suppuration, ulceration and inflammation. These suffice very well for natural conditions. In this way the stump of the cord is removed and the ulcer that is left is healed. These methods do not satisfy us entirely to-day in our civilized state. We have begun to control the processes of Nature which show in our bodies just as we have learned to control the forces outside of us. We can to some extent eliminate sloughing and inflammation from the healing process. This we do by the aseptic technic which follows from the applications of the discoveries of Pasteur and Lister. You know what a revolution the principles of asepsis have made in surgery. Is it worth while to apply the principles of the new surgery to the management of the child's navel?

Perhaps the majority of physicians would answer that the old methods of caring for the cord are good enough. By the old methods I do not mean now the primitive methods of animals and savages, that is, tearing or biting off the cord and letting the stump hang until it is separated by rapid suppuration in one or two days. The old methods to which I refer are semi-surgical methods of the ordinary nurses and midwives, namely, cutting the cord with a stump one to two inches long and keeping it wrapped in a piece of old linen and covered with oil or lard or perhaps dusted with powder till it falls away. Treated in this way the stump sloughs off in from two to six days and the ulcer, retracted below the surface of the skin, heals in a few days more. There is really very little difference between this method and what might be called the primitive method. The suppuration is nearly as rapid and the inflammation quite as intense.

The dangers of this method of treatment are not appreciated, because in general the importance of disturbance of navel healing in the causation of infantile disease in the first days of life is not properly studied. The management of the navel is generally left to the nurse, even when she is totally ignorant. If the temperature of the infant is regularly taken, which is rarely the case, fever is often or generally found, but this is ascribed to colic or some such cause. There is good reason for the statement that this fever is due in at least 90 per cent. of the cases to navel infection. Postmortem examinations of infants dying within two or three weeks of birth generally show, besides localized inflammation around the navel, also an arteritis, phlebitis or lymphangitis of the umbilical vessels, or all of these pathological conditions together.

It is not my purpose to give a complete résumé of the investigations in the pathology of the separation of the cord nor of the studies concerning the anatomy and histology of the cord. There is already a considerable modern literature which has recently been summarized in English by Dickinson[1] of Brooklyn, whose monograph is accessible to all. I will only call attention to the papers of Eroess of Budapest published in 1891, which was one of the first of the more recent papers to draw attention to the importance of this subject. He found in a careful study of cases in the Budapest clinic that the process of separation was pathologic in 68 per cent., that fever was due to navel infection in 45 per cent. of the cases, and that very serious illness and in some cases death were due to these diseased conditions. All who have given the subject any attention are agreed that navel cord separation is one of the most serious dangers that menace the newborn child and that the subject of its management is of the greatest importance.

While inflammatory changes due to bacterial presence are no doubt a constant accompaniment and factor in the separation of the cord and healing of the navel wound in a state of nature, it is possible that these events may occur without inflammation, that is, in a state of asepsis. There are three distinct physiological processes: 1, drying the cord; 2, separation of the cord from the body of the child; 3, epidermization of the navel wound. The drying or mummification of the cord is due to retrogressive changes in the Wharton jelly, resulting from lack of nutrition, combined with the desiccating action of air. The mummification makes the cord impossible as soil for bacterial growth. An impervious dressing would prevent its desiccation. Should bacteria then gain access to it there would result moist gangrene. This is often found in the stump, particularly that portion next the navel which is much less apt to mummify than the outer end. The lesson from the study of the retrogressive changes in the cord teaches that if any of the cord is left attached to the child it should be freely exposed to desiccation.

It is in the second process, that of separation of the cord, that the influence of the bacteria is in Nature's plan most efficient. There is no doubt that bacterial growth favors the early separation of the cord. Yet a sterile dried cord would in time be thrown off, when its vital connection is severed, just as a sterile blood scab is separated from an aseptic wound. The best way to remove the cord aseptically is by cutting the jelly

* Read before the Chicago Medical Society, Feb. 19, 1902.

1. Robt. L. Dickinson: Is the Sloughing Process at the Child's Navel Constituent with Asepsis in Childbed? Am. Jour. Obst., December, 1898; June, 1899.

with scissors and ligating the vessels, as will be described. By using a silk ligature drawn pretty tightly around the cord at its base a considerable part of the jelly is cut through, but by this manipulation we are unfortunately often in danger of cutting through the vessels at the same time.

The epidermization of the denuded surface left by the cast-off cord will go on much better when the parts are sterile than when they are infiltrated with bacteria and their poisons. Hence, this important process is favored by surgical treatment.

It will therefore be seen that it is possible to manage the cord according to surgical principles. Suppuration, although natural and almost constant, is not necessary. These statements, probably true from our knowledge of surgical pathology, have been verified by clinical experience.

If surgical treatment of the cord is possible the prevention of infection is certainly desirable. The fact that most babies get on pretty well or at least do not die when the cord is left to Nature, which is practically what we do no matter how much we fuss with it in any of the old ways, should not satisfy us. Most women will live even if the obstetrician is not clean, but there is generally some disturbance in child-bed and at times serious trouble. Just as we have learned that the strictest possible asepsis in labor pays, so we shall find in the course of the next few years that surgical treatment of the cord will pay. I do not believe that the ideal method of managing is yet perfected. The methods that I shall shortly describe are only those that are best at present to advise for general use.

LIGATION.

We first ask where to ligate and cut the cord. It has sometimes been claimed that ligation is unnecessary; but the experience of all of us with hemorrhage in cases of poorly ligated cords would prevent the introduction of any practice which did not secure us against the possibility of bleeding. The mass ligature is in almost universal use and is no doubt to be advised for the use of nurses and those physicians who have no surgical experience. The objection pertains to it that in a cord of moderate size the rapid shrinking of the Wharton jelly leaves the knot loose and makes secondary hemorrhage possible. For mass ligation a narrow tape perfectly sterilized is best, as it will not be as apt to cut through the gelatinoid cord when tied very tightly as would a silk ligature. The elastic ligature has had some adherents, and ingenious devices for fastening it have been devised. Its use is somewhat complicated and the after-management is not so simple. As said above, there is no question that separate ligation of the vessels at the base of the cord is the best procedure not only because it is a sure protection from hemorrhage but also because it best favors the separation of the cord. The crushing of the cord and vessels with forceps and the use of the cautery as hemostatic have been tried but have no advantages to justify their adoption.

The cord has been tied at the junction of the skin and cord, and at all distances from the body. Unless the ligation is made close to the body of the child the best plan is to tie about 1 inch, or 2 cm., away and cut the cord 3 to 5 mm. beyond the ligature. This length of cord allows it to be laid over on the abdomen for dressing and access to the separating zone is easy. The increased length of the cord has no influence on the rapidity of its dying. If the stump is too short it will not lie well on the child for dressing and is more likely to be pulled by the clothes and when the child nurses or is handled.

The best place for tying is, however, close to the body of the child, at the junction of the skin of the body and the amniotic sheath of the cord. When tied here and cut as closely as possible the after-dressing is exceedingly simple. The only objection is the fear of secondary hemorrhage. This is overcome almost completely by adopting the technic to be recommended. Such a hemorrhage, if it did occur, could be controlled by the nurse with pressure until surgical help could be secured. August Martin, formerly of Berlin, proposed to provide against the danger of secondary hemorrhage by severing the cord with the actual cautery, using for this that article of some ladies' toilet, the curling iron. This cauterization would also serve to remove the cord jelly or hasten its mummification and prevent infection. The danger of burning the squirming child, as well as the demonstration of the uselessness of the cauterization by the good results of the Paris clinics, where the cord is severed with the scissors after short ligation, has led Martin and his followers to abolish the cautery.

DRESSING.

In studying the best dressing of the cord, we must keep in mind the three physiologic changes that must take place, namely, the dying of the cord, its separation from the body and the epidermization of the surface left by the stump of the cord. Some, among others Goodell, have advised against any dressing, in order to favor the drying of the cord. That this is an important process all must admit who have seen the condition of moist gangrene and trembled over its possible dangers. Yet desiccation is interfered with only slightly by a dressing of gauze or absorbent cotton, which may perhaps help in protecting the cord from infection. Under any circumstances the impervious dressing should be proscribed.

It is essential for us to determine whether we shall strive to secure an aseptic or an antiseptic dressing. It may be admitted at once that an aseptic management of a long stump is a practical impossibility. If the duration of the management lasted only a few hours the attempt would not be so hopeless, but the most particular nurse would fail to secure asepsis in a dressing on an infant's belly for a period of three or four days. Hence, if we allow a stump at all we must be content with antisepsis and indeed with partial success. The avoidance of contamination as far as possible is of course our aim. We should be able to exclude the more dangerous contaminations such as tetanus and erysipelas germs. The saprophytes, the staphylococci and probably the colon bacilli will surely appear. Hence, the choice and method of using an antiseptic becomes an important question.

The objection to a routine and efficient use of the poisonous antiseptics like sublimate and carbolic acid are apparent. The much used boric acid is too inefficient to merit consideration. For several years I have used and advocated in my classes the use of alcohol. In 1900, Ahlfeld of Marburg, who is well known as an advocate of the practical value of alcohol as an antiseptic, published his method of treating the cord with this agent, a method which he had used for three or four years and which is essentially like my own. The method consists in thoroughly washing the region of separation of cord from the body once or twice a day with alcohol and protecting this region in the interval

with sterile or antiseptic gauze or cotton. My results agree with those of Ahlfeld in being on the whole quite satisfactory if not ideal.

Theoretically an antiseptic powder would be desirable, but practically the use of powder has not fulfilled our expectations. Iodoform is not to be thought of, on account of its odor if for no other reason. Bismuth, boric acid, dermatol, etc., are inefficient or form crusts under which the process of suppuration goes on undisturbed. Some of these powders may be of value after the cord has separated before the denuded surface is covered. For the slight eczematous condition sometimes found at this time I have often used nosophen with advantage.

Closely connected with the subject of the dressing of the cord is that of the bath of the infant. Much has been written on this subject, particularly since Doktor in Pest, following up the studies of Eroess, showed the improvement in the morbidity of infants by omitting the daily bath. It may be admitted that the tub bath is a source of contamination and in aseptic management such as we should strive for in short ligation of the vessels of the cord it should be avoided. In the antiseptic management which alone is possible with a stump it is doubtful if the bath has any deleterious effect. We must assume that bacteria begin to appear in the region of the navel in a few hours after thorough disinfection. A careful enclosure of the cord with sterile cotton will hinder the access of the germs somewhat, but in twelve hours and at least in twenty-four hours they will be found in contact with the separating cord. Now, the washing off of the cotton or gauze with alcohol and the renewed disinfection is necessary. It is not probable that the momentary contact of the bacteria in the bath water will lead to much extra contamination. The germs thus brought to the cord are at once washed away by the alcohol that is used immediately after the bath.

It is quite possible that the wetting of the cord will hinder its mummification and therefore be a further objection to the tub bath. The immediate drying of the cord after the bath and the use of the hygroscopic alcohol will, however, reduce the objectional influence of the bath to the minimum.

For these reasons I have generally allowed the bath in cases treated with a stump and have not become convinced of any deleterious effects. I always direct that the child be cleaned from all feces before it is bathed and if it has boils or pustules I interdict the tub in order that other parts of the body as well as the navel should not be contaminated.

Our observations on the antiseptic management of the navel apply to those cases where a stump of greater or less length is left. When the ligature is placed at the base of the cord and particularly when the gelatinoid envelope of the vessels is removed and the vessels ligated directly, I believe that we may strive to secure asepsis. The first method of ligation, which is that of Pinard and the one now followed by Martin and many others, may require some antiseptic treatment, for some jelly remains to mummify. The little button of jelly 2 or 3 mm. thick above the ligation is generally pulled into the navel funnel and prevents the infection of the separating junction. There can be no harm in pouring into the funnel alcohol at change of the dressing until the button separates. The aseptic dressing should protect the navel, which is no larger than after the falling off of the ligature.

When the gelatinoid envelope is removed and the vessels tied directly with silk or catgut the cut vessels retract within the navel depression and aseptic management is perfectly simple. Only a dry aseptic pad over the navel is necessary. This method of management first described by Flagg, and since elaborated by Dickinson, is, I believe, very valuable and probably susceptible of general adoption.

Another method of procedure more radical than the last has been advocated by Dickinson. It consists in suturing together the skin margins of the navel after removing the cord. The vessels may first be ligated with catgut or they may be included in the grasp of the suture. Although I have not tried it, yet I mean to do so, for the suggestion is reasonable and we may find in this operation the coming method of the rational treatment of the cord.

MANAGEMENT OF THE CORD.

I will now briefly describe in detail the plan of managing the cord from the moment of the birth of the child. Just as the head is being expelled, a clean towel is got in readiness to wrap the child's body in the region of the cord. This towel is applied as soon as the body is born, then the child is wrapped in a large sterile blanket and laid between the mother's legs till the cord ceases to beat. It is then tied 4 or 5 cm. from the body with a sterile tape; the vessels are emptied out toward the placenta by the pressure of the thumb and forefinger of the left hand, and then the cord is held by the thumb and finger about 3 cm. away from the ligature. The cord is then cut with a sterile scissors and the placental end dropped. It is probably better not to tie the placental end unless a twin remains in the uterus. I generally cut the cord off again close to the vulva in order that an antiseptic pad may be applied while waiting for the third stage of labor. After the child is separated from the mother the body is wrapped well in the sterile towel so that the cord can not become contaminated. Then it is laid away until the mother is cared for. We then attend to the child. The nurse having prepared the room for the baby's bath, generally the bath room, by securing a temperature of about 90° F., having in readiness the bath, clothes, alcohol, cotton or gauze, scissors, artery forceps and ligature, takes the baby on her lap and holds down the arms and legs with clean towels. With sterile hands I unwrap the towel from around the cord and with a medium-size silk ligature retie the cord at its base or the junction of the skin and amniotic sheath. Without cutting the ligature I then carefully cut off the cord 2 or 3 mm. beyond the ligature. If the cord was quite thick, or if there is any sign of bleeding from the vessels, or if I have any doubt of the security of the ligature, after careful inspection, I enclose the cord once more with the ligature. The ends are then cut off rather short, and a large sponge of cotton saturated with alcohol is placed on the navel. This is kept in place by the nurse while she oils the child to remove the sebum, and then it is placed on its back in the tub that is only partly filled with water or the child is washed with a sponge. After the bath fresh alcohol is placed on the navel while the child is being dried and measured. Then a dry sterile pad of gauze or cotton is placed over the navel and the usual bandage applied. This pad stays in place without trouble till the next dressing of the child. As a rule, the child is bathed and the navel attended to every twenty-four hours. At the subsequent dressings a cotton sponge saturated with alcohol is applied before the bathing and also afterwards. Then a dry dressing is used. The ligature dis-

appears with the thin dry remnants of cord above in the fossa of the navel and is never seen until it comes off on the third to the sixth day.

The method of ligation of the vessels I have used too little to justify an opinion concerning it. My impression is that it will supersede the other method. I have performed it according to the directions of Dickinson as described in his paper before alluded to. The child is prepared for the little operation as described, and then holding the stump of the cord in the left hand we cut around the skin margin with blunt-pointed scissors. One can generally see the vein near the surface at one point. Here we must be careful not to cut the vein. The jelly is then stripped back like a cuff leaving the vessels exposed. They are then tied with a fine silk or catgut ligature and cut beyond the ligature. They at once retract and give us no further trouble. A pad is then placed on the navel and held with a bandage. The child is bathed with a sponge and not placed in a tub for a week.

These methods can not be recommended to nurses. For them I advise the procedure I myself followed until about ten months ago. The cord is cut primarily as before described, leaving a stump about 2 cm. long After the bath the cord is wrapped in cotton saturated with alcohol, which is allowed to remain three minutes. This is then removed and the cord wrapped in sterile absorbent cotton and laid to one side and bandaged. At the subsequent dressings the cord is wrapped in alcohol-saturated cotton both before and after the bath. Care is taken to apply the wet cotton to the base of the cord at the line of the separation, for it is always at this point that suppuration occurs. In applying the dry dressing it is also carefully wrapped around the cord at the line of demarcation.

By this method of management the separation of the cord is probably delayed. It is attended, however, with no infection and that fact more than counterbalances for the delay in separation. The greatest objection to this method is the care necessary in the dressing and the inconvenience to the child, inseparable from a long stump that is apt to pull on the clothes and cause trouble.

SOME OBSERVATIONS ON RESECTION OF THE RIBS IN EMPYEMA.*

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The management of effusion into the thorax will depend much upon the character and extent of the inflammatory process which produced it. Netter has shown that in children empyema is of tubercular origin in 25 per cent. of all cases. The other 75 per cent. is due principally to the pneumococcus, with the staphylococcus, streptococcus, the Eberth and colon bacillus as occasional sources of infection. In adults Netter and Eichhorst have found 65 to 69 per cent. to be tuberculous.

It is generally recognized that empyema resulting from tubercular pleurisy has a much less favorable prognosis than when of pneumococcus origin. The latter variety of cases is attended by a less stubborn proliferation and the lung is left more patent and resilient than is the case in tuberculosis.

A very small percentage of cases are permanently cured by aspiration. Da Costa believes the cures to be limited chiefly to post-pneumonia cases in children and declares pointedly that "aspiration is not to be considered a method of curative treatment in empyema."

In very young tubercular subjects of progressive type Lockwood prefers aspiration and regards it as the surgical measure of election in these cases. In fact it is the experience of most operators that extensive resection in young tubercular subjects of florid type, is not attended by results sufficiently favorable to justify the hazard of such a radical measure.

In operable varieties of empyema of long standing, where the pleura is greatly thickened, nothing but extensive resection of the ribs should be undertaken. The delay so common in these cases can offer no possible hope for the patient and only endanger his life from amyloid degeneration of the liver, spleen and kidneys.

There is a principle involved in the operation for empyema which underlies the argument for radical interference and must not be lost sight of in the consideration of every chronic case. This principle consists, not in evacuation, not in drainage simply, but in the obliteration of an abscess cavity, whose non-collapsible wall is a bony arch. This obliteration may be accomplished either by releasing the thickened pleura over the bound-down lung, as De Lorme has advocated, or if this be not feasible on account of atrophy, tubercular consolidation or fibrous contraction, then collapse of the thoracic wall may be effected by some modification of Quenu's, Estlander's or Schede's method.

It is evident that the choice of operation must be governed largely by the pathologic condition in each individual case, the long-standing cases with large cavities calling for more extensive resection than those of briefer duration.

Resection of the ribs in empyema was first advocated by Warren Stone of New Orleans. Since his day a great variety of technique has been employed, but underlying each method has been the principle heretofore enunciated.

Every chronic patient presenting himself for operation should have the urine carefully examined for evidences of amyloid degeneration. As much time as the condition of the patient will permit should be devoted to preparation for the shock, which very commonly attends thoracic surgery in depleted subjects.

If a thoracotomy has previously been done, the usual preliminary withdrawal of the greater portion of the pus will, of course, not be required. I am in the habit of waiting a week or ten days after tapping before proceeding with the resection. This affords time for the heart to return to something near its normal position and for the patient to gain resistance. The heart should be supported by strychnia a week before operating. On the table 1/20 grain should be given hypodermically, to be repeated at the conclusion of the operation if necessary; and by the rectum a liter of warm salt solution, to be followed by subcutaneous transfusion of the same during the operation, should the pulse require it. These well-understood measures of preparation and support are detailed here for the purpose of their especial emphasis, and because of a belief that often they are grossly neglected in this class of surgery.

The principle of obliteration of the pus cavity is somewhat that of the contraction of a hollow sphere. Hence the widest resection should be in a plane crossing the center of the sixth rib, and should not go higher than the second, nor lower than the ninth rib. It has been

* Read before the Colorado State Medical Society, at Denver, June 18, 1901.

my observation that the ninth is best left undisturbed, and that whenever a pocket is left unobliterated it is commonly found to be near the apex and next to the axilla.

The U-shaped flap of Schede is much to be preferred to the straight or elliptical incisions of Pearce Gould or the intercostal incisions of Estlander. Schede's flap was designed to be followed by the total shearing away of the ribs and muscles, from the angle posteriorly to the cartilage anteriorly. But this technique may be so modified as to include an ellipse, the transverse diameter of which will measure six or eight inches, exsecting rib and periosteum and leaving the costal muscles and parietal pleura. With this modification it becomes necessary to curette the thickened parietal pleura as well as that over the lung, in order to obtain union when the two surfaces are coapted.

The procedure advocated by De Lorme whereby the thickened pleura is torn away from the lung and the latter allowed to expand, is theoretically ideal, but it is adapted only to the more recent cases where the lung is merely bound down and not extensively atrophied or consolidated. It is a procedure attended by considerable danger, and Kiliani reports the case of a little girl 9 years old, on whom he operated, who bled profusely through the mouth and nose from laceration of the lung in tearing away the densely adherent pleura.

Perhaps no feature connected with the operation and after-treatment of empyema has been more widely discussed than that of irrigation. At present most operators are opposed to irrigating either before or after the resection. Several very reputable surgeons have limited washing out the thorax to the fetid class of cases. But there seems little reason for this distinction and it may be confidently stated that an increasing number of surgeons believe irrigation to be a dangerous and needless measure. Senn wipes the cavity dry with gauze sponges, and finds in the more recent cases this to be sufficiently erosive to clear away the lymph coagula and expose the capillaries, thus avoiding the curetting required in the older and denser deposits. In the latter class of cases, however, nothing short of deep and thorough denudation will answer. No islands of lymph deposit should be left behind, for such constitute one of the most potent causes of pockets and fistula through which the discharge may persist.

Care should always be exercised to introduce the lightest possible gauze drain and to maintain perfect collapse and coaptation of the thoracic wall with the lung surface. One of the strongest arguments against the use of irrigation, aside from the danger of syncope, is the hydrostatic distension it causes of the walls designed to be in collapse.

In conclusion, it may be well to emphasize certain well-defined facts in connection with this review:

1. Cases for operation must be selected with much care and judgment and without delay for repeated or too frequent aspirations.

2. Progressive tubercular involvement in young subjects is a contraindication for anything more radical than simple thoracotomy and drainage.

3. Cases long delayed, until the organic pleura is dense and contracted, require free resection and are apt to be attended by greater deformity and loss of lung tissue, than those resected earlier.

4. The periosteum must be removed completely and the U-shaped flap affords the best covering for this, as it does for the lung in the true Schede technique.

5. Irrigation is not at any time to be employed. The cavity may be wiped, both before and after curettage, with dry sterile gauze sponges. After this a light drain of iodoform gauze may be inserted, and the usual thick sterile dressing of gauze and cotton under snug compression by adhesive strips, placed over the resected area. The after-treatment is that of any collapsed abscess cavity, drainage being abandoned as early as possible. Firm pressure over the collapsed area should be maintained by properly applied dressings until coaptation of the flaps has been fully established and the sinus closed.

Scoliosis and drooping of the shoulder on the affected side have always seemed to me to be needlessly dwelt upon and to constitute in the average case a very unimportant sequel to resection. I can recall no case where it was sufficiently marked to be worthy of comment. Much can be done after the wound has closed to correct through proper muscular and respiratory exercises the scaphoid depression which deflects the spine and drags the shoulder downward.

McPhee Building.

CASE OF RIGHT CECAL HERNIA, COMPLICATED BY HYDROCELE AND SUPPURATIVE APPENDICITIS.

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CHICAGO.

Mr. D. G., aged 78, was sent into the Chicago Hospital with a diagnosis of probable strangulated inguinal hernia. Patient was found suffering intense abdominal pain, and unable to pass feces or flatus; temperature was 101.4, pulse 110, respirations 34. There was no nausea or vomiting. He gave a history of having had right inguinal hernia for over sixty years, with small hernia on left side for about twenty years. He had worn a truss and had suffered no previous pain or particular inconvenience other than an obstinate constipation. Bowels had not moved for ten days previous to entering hospital. It was impossible to get a satisfactory history.

Physical examination revealed a greatly distended, generally tender, and markedly tympanitic abdomen. Hernia on left side was protruding at the external ring, about the size of a hen's egg. Right hernia was very large, scrotum extending downward nearly twelve inches. In the bottom of the scrotum was a large hydrocele. It was impossible to differentiate the testicle. Just above the hydrocele was a hard mass about the size of an orange, firmly fixed to the hydrocele sac, and entirely incompressible. Above this mass could be distinguished the presence of bowel, filled with gas, and apparently containing no fecal matter. Hernial sac and contents were hard and inelastic; the hernia could not be reduced in the slightest degree, and there was no impulse on coughing. Diagnosis was made of hydrocele, hernia probably strangulated at internal ring, with hypertrophy of sac and possible malignancy. Very slight returns of scybala resulted from enemas.

Operation was performed Aug. 8, 1901, with chloroform narcosis. A long-curved incision was made on the right side through skin from point above internal ring to the bottom of the scrotum. Hydrocele was turned out and contents evacuated by an incision preparatory to Sach's operation; hernial sac was exposed and isolated as well as possible. Sac had a diameter of over three inches, and was intimately adherent to the surrounding tissues. Upon cutting into the sac, along the anterior surface, it was found very much hypertrophied, being about three-eighths of an inch in thickness. The interior of the sac was filled with a doughy, yellowish-white, agglutinated convoluted mass of bowel adherent also to the internal surface of the sac, and to the lower tumor mass, which, at first sight,

appeared to be a carcinoma of the epididymis. It was impossible to visually or palpably demonstrate the variety of the bowel; an extreme hyperplasia of the serous and muscular coats destroyed all semblance of normal intestine. The bowel and interior of the sac were covered with a muco-purulent material of offensive odor. This secretion was wiped away and the upper portion of the bowel was protected with gauze pads. After partial separation of the adhesions, the large and small bowels were differentiated. Adhesions were broken down in the course of which a portion of the hypertrophied serous coat was stripped from the lower portion of the cecum; this demonstrated the vermiform appendix passing downward into the tumor. The appendix was ligated and cut as close to the cecum as possible. During the manipulations there was an escape of a small amount of very fetid pus from the lower part of the appendix; because of this, and because of the agglutination of the appendix, testicle and hydrocele and hernial sacs, it was decided to remove all *en masse*. All adhesions of bowels up to the internal ring were broken down and tied off and a large amount of much thickened omentum cut away at this point, and after a careful toilet, the intestines were replaced in the abdominal cavity. The spermatic cord was ligated and cut; the hypertrophied hernial sac was cut away flush with the internal abdominal ring, and removed, together with the appendix, testicle and hydrocele sac. The internal ring was closed with interrupted sutures of catgut, and the internal oblique and transversalis muscles and conjoined tendon sutured to Poupart's ligament well down to the pubic spine. United the separated external oblique aponeurosis, obliterating the external ring, and closed the skin with silkworm gut, inserted silkworm gut drainage in the upper and central portions of the skin wound, and packed the scrotum with iodoform gauze. On account of the exhausted condition of the patient, did not operate on small hernia on left side.

Patient was given 1000 c.c. of normal salt solution subcutaneously on the table. He returned from the operating room in a feeble condition; temperature 100.2; pulse 106, intermittent; respirations 44. Sulphate of strychnia, gr. 1/30, was given hypodermically every two hours, and one pint of normal salt solution at a temperature of 115 per rectum, every three hours. He had fair bowel movement; was very restless during the night.

August 9: In much pain, vomiting and hiccoughing severely. Abdomen distended and tender; slight bowel movement; some flatus passed; average temperature 100.2; pulse 96; respirations 34.

August 10: Normal salt enemas were discontinued; there was slight bowel movement. Temperature 100; pulse 85; respirations 36; severe pain, with great abdominal distension; much weakness.

August 11: Hot turpentine stupes were kept constantly on the abdomen; there was some vomiting and hiccough. He passed a little flatus, temperature not running above 99. Predigested beef 3ss was given every three hours.

August 12: General condition improved. There was no return from enemas; vomiting and hiccough were lessened.

August 13: There was slight bowel movement, with escape of a great deal of flatus. Abdominal distension was much reduced. Dressed wound, removed gauze and silkworm gut drains. Wound suppurated superficially; was repacked with iodoform gauze.

August 14: Vomiting and hiccough disappeared. There were four free bowel movements; no abdominal distension or pain; hot turpentine stupes discontinued. General condition was much improved; predigested beef continued. Temperature averaged 99; wound discharged freely at upper and lower angles.

Second week: Wound was irrigated and dressed daily, still suppurating and discharging freely. Drainage was inserted beneath skin from the upper angle to the center of the wound, and from the center to the lower angle. General condition was good, temperature averaging normal.

Third and fourth weeks: Wound still suppurated to lesser degree; sinuses beneath skin gradually closed; daily dressings, and through-and-through irrigations were continued. Bowels moved freely.

Fifth week: Temperature was normal or slightly subnormal; wound still discharged, but nearly closed. Bowels were in good condition.

Patient left hospital at the end of the seventh week; walking about; wound closed except very small superficial sinus, with no sign of return of hernia. Two weeks later patient reported wound entirely closed, with no return of hernia. He is doing daily work without a truss or any form of supporter.

The specimen was submitted to Dr. W. A. Evans for examination, who reported as follows: "Gross appearance: The specimen consists of a testicle with much thickened tunics and hydrocele and peritoneal sacs. The spermatic cord is very hard and tortuous, winding over surface of sacs (hydrocele and hernia). The exceedingly thick peritoneal sac contains an appendix which in its upper portion has its submucosa and mucosa stripped from the muscular tunics. The lower part has an enormously developed muscular tunic, and is embedded in a mass of old scar tissue. There is also some omentum greatly thickened. Sections were made of appendix at tip, and proximal end of the intestine. Microscopically, the appendix shows hyperplasia in the mucosa, submucosa, muscle tunics, and in the outside fibrous coat. There is an acute inflammation engrafted upon a chronic one. The vas deferens shows an enormous hyperplasia of fibrous tissue. There is no evidence of malignant disease."

The hernia evidently had been unreduced for a long period of years. The adhesions of the appendix to the lower portion of the sac and testicle, and numerous bowel adhesions resulting from an extension of appendical inflammation necessitated an intense peristaltic action in the misplaced bowel, with great hypertrophy as the result.

A NEW METHOD FOR THE REMOVAL OF INTERNAL HEMORRHOIDS UNDER LOCAL ANESTHESIA.

THOS. CHAS. MARTIN, M.D.

President of the American Proctologic Society, Proctologist to the Cleveland General Hospital, Professor of Proctology in the Cleveland College of Physicians and Surgeons.

CLEVELAND, OHIO.

The subject of hemorrhoids often prefers to bear those ills he has than fly to that relatively desperate refuge afforded by general anesthesia and be relieved. As a consequence he may become a crank or an invalid. He receives little sympathy and less help, often.

The non-malignant anal growths may be removed painlessly without resort to general anesthesia by means of the technic presently to be described, provided it be performed by the trained hands of an operator who thoroughly understands the principles of infiltration-anesthesia, and who, furthermore, has been sufficiently persevering to master the difficulties encountered in the application of these principles to this operation.

The clamp, Fig. 1, consists of a hollow cone three and one-quarter inches in length and three-quarters of an inch in diameter at its distal extremity, and one and three-quarter inches in diameter at its proximal end. One quadrant of the cone is fenestrated, Fig. 3. This is occupied by a movable blade with a serrated edge, which makes contact with the cone's serrated edge. The movable blade is sheathed in the cone when the jaws of the clamp are separated. Hence, after the instrument is introduced it may be made to receive the pile without irregularly expanding the anus. The great essential to painless manipulation of the sphincter is the even distribution of pressure throughout its circumference. Users of irregularly dilating speculums have been confused and baffled by the pain they provoke.

Preparation of the patient consists in daily gradual dilatation of the anus by means of Kelly's conic dilator until the anus may be made to open painlessly to the

degree necessary for the introduction of the clamp. Those patients who long have been subjects of hemorrhoids have a dilated or relaxed sphincter, and therefore do not require this preparatory treatment.

The patient should be placed and made comfortable in Sims' posture. The table's upright knee-piece should be adjusted to support the patient's legs, and the light focused on the field of operation.

The anoscope should now be employed that the precise situation of each hemorrhoid may be determined. These should be noted as occupying certain given zones and quadrants of the anus.

The summit of each tumor should be infiltrated with a one-tenth of one per cent. solution of eucain. A very fine needle should be employed. The needle should have a long tapering point; its introduction provokes little or no pain, and the thin wall of a varicose hemorrhoid may be infiltrated. Whereas, on the other hand, a needle of larger diameter will enter the tissues less easily and will provoke great pain, and perhaps may be so much thicker than the capsule of the tumor it is designed to anesthetize, that instead of effecting an infiltration of that structure the anesthetic may be driven at once into a blood-space and directly into the circulation.

The now artificially edematous and anesthetized portions of the several tumors should be grasped with curved hemostats and the anoscope withdrawn. It will then be noticed that the tumors are somewhat prolapsed under the weight of the pendant hemostats, and that because of their handles the anoscope can not be drawn off them. They should be detached, withdrawn from the anoscope and reattached, one by one. Thus, in order, each of the prolapsed tumors is to be released and again seized and the anoscope removed from field of operation.

The attached hemostats should be surrendered to an assistant, who should radiate them from the anus and well out of the way of the operator.

The operator should take the well-lubricated clamp, adjusted as shown in Fig. 2, and introduce it into the anus with its blade pressing against the tumor which first is to be removed. When the instrument is buried to its shoulder the fenestrum should be opened, as shown in Fig. 3. The hemostat, which is attached to the tumor within the now exposed field, should be used as a lever to drag the hemorrhoid into the clamp's chamber. The pressure incident to the introduction of the clamp often expresses the eucain from the tumor so that it is necessary to re-anesthetize it before subjecting it to such manipulation as is necessary to carry it completely into the clamp. As the pressure of the clamp from this time on obstructs the local circulation, the infiltration should be thorough. Not only must the tumor itself be anesthetized, but its base also, and the tissues underlying this. If the patient should feel pain at any time during these manipulations, it indicates that the infiltration is incomplete—complete it. The clamp should now be closed and locked, and the growth cut away by means of scissors.

Figure 1.

Figure 2.

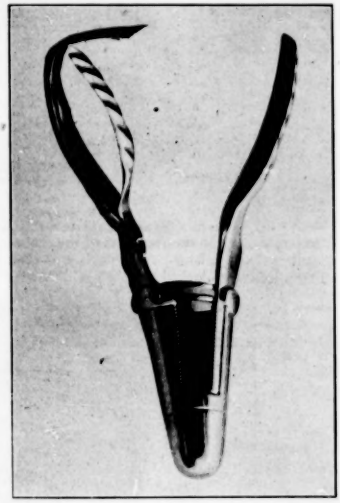

Figure 3.

If the character of the growth is such that the operator has reason to fear secondary hemorrhage, the wound should be lock-stitched with catgut. If it be of the connective-tissue or fibrous variety the pedicle should be cauterized. The red-hot platinum should be applied for a second only and repeatedly, thus the clamp will not accumulate sufficient heat to distress the patient, and the lymph will be coagulated and plug the vessels.

Tentatively, the clamp should be made to release the wound. If there be any bleeding it may be controlled at once by suture or cauterization.

The clamp should be withdrawn gently and reintroduced for the removal of other hemorrhoids, if necessary.

This clamp may be separated and rendered aseptic—Figs. 4 and 5. As the tumor operated on is within a sterile metal chamber, the former may be antisepticized,

and, therefore, the field of operation may be rendered surgically correct. Insufflation of iodoform or other antiseptic powder upon the wound fortifies it in a measure against subsequent infection.

Because of its peculiar form this clamp effectually

Figure 4.

blocks the field of operation against the accidental invasion of feces or the remnant of an enema. There can occur no hemorrhage to inundate and obscure the field. The pile is dry-docked.

Figure 5.

This clamp demands that the wound shall be linear in form and parallel with the axis of the anus; it dilates the anus to a degree greater than its normal excursion, hence there will be no subsequent contraction and stricture as a result of this operation.

That this method of clamp operation is inapplicable to inflamed or thrombotic piles, is obvious.

Eucain is much less toxic than cocain. Eucain may be sterilized by boiling without affecting its anesthetic property. An ounce or more of a one-tenth of one per cent. solution may be used without danger, for on the removal of the tumor most of the eucain is recovered. If the eucain be prepared in normal salt solution its injection is not so likely to be followed by smarting and burning.

Local anesthesia is a surgical refinement; skill in effecting it may be acquired only by the exercise of patience and practice.

729 Case Avenue.

A METHOD OF SUTURING THE GALL-BLADDER TO THE PARIETES IN GALL-BLADDER OPERATIONS.

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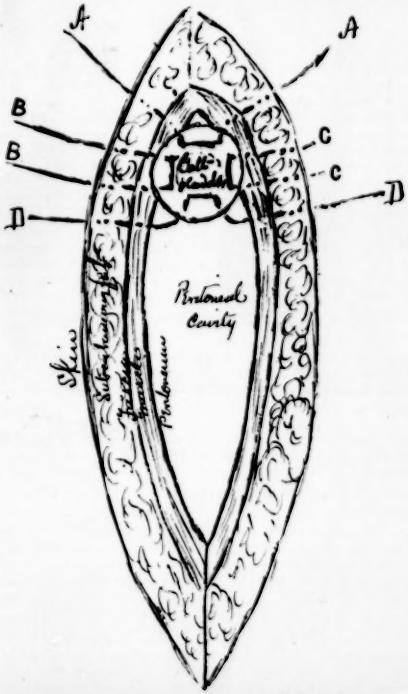
TROY, N. Y.

In my last twenty cases I have attached the gall-bladder to the parietes in the following manner: A



full curved Hagedorn needle is threaded with silkworm gut and passed mattress-stitch fashion from within the gall-bladder through the peritoneum, overlying muscle

and fascia; then it is brought out and reintroduced and carried out through the skin a short distance from the wound. The opposite end of the silkworm gut is introduced in the same manner and the ends fastened by two or three shot, the uppermost of which is crushed. At first I used five sutures of this character to suspend the gall-bladder, but now I rarely use more than three. The suspension sutures are removed on the tenth day, or earlier, if indicated. The advantage in this form of suture is that there is no danger of the sutures falling into the gall-bladder to become the nidus of new concretions as in the cases reported by Homans, Kocher and Kehr, and the early removal of the sutures relieves the patient of the annoyance of the extrusion of unabsorbable sutures weeks after operation. In no instance have I had a fistula and the healing has been as prompt as was desirable in each case. In closing the abdominal wound I prefer the through-and-through suture of silkworm gut, at least three to the inch, passed so as to take in little peritoneum, a good grip of the muscle and fascia and very little skin, and not drawn very tightly. The time required is very brief and the joint a sufficiently light one.

GLIMPSES OF THE PRACTICE OF MEDICINE AND SURGERY IN BRITISH AND SPANISH HONDURAS.

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The physicians in sparsely settled tropical countries have many disadvantages, difficulties and hardships to contend with unknown to their colleagues in prosperous countries in the temperate zone. They are isolated from the great centers of medical education, and the benefits arising from professional intercourse and attendance upon active medical societies. The defective mail service interferes with the regular supply of recent medical literature. The physician in remote country and coast towns is often thrown upon his own resources in the treatment of grave cases, as satisfactory counsel is frequently unavailable. He is seldom adequately remunerated for his services as the majority of those who apply to him for aid are too poor to reward him for his work. In many instances he furnishes the medicines or dressings without any expectation of a return of his cash outlay. If he is not in possession of an unusual degree of energy, he soon falls into a routine practice and finds himself in a few years far behind the rapidly advancing medical progress. Exposed to the depressing effects of a tropical climate, he leads a life which is not conducive to scientific research and professional advancement. It is under such circumstances that encouragement from outside sources often succeeds in stimulating the flagging professional and scientific interests. The occasional medical journal or some new medical book sent to these distant colleagues is always appreciated and its contents eagerly devoured.

CHARMING VACATION SPOTS.

Central America is an ideal place for a midwinter vacation, and it is somewhat strange that it is so seldom visited by our medical men who need rest for a few weeks at that time of the year. It is very accessible and can be reached from Chicago with comfort and ease in less than a week. The steamers of the United Fruit Company sail from New Orleans for the different ports every week. The voyage of five days is a restful one, admirably adapted for mental recuperation and physical rest. The gradual transition from ice and snow to a tropical climate is an experience well calculated to divert the channel of thought from the bedside and operating room to Nature's wonderful products and works of art. To leave ice-bound Chicago and find yourself ten days later shooting monkeys and parrots in the primitive forests of Spanish Honduras is an experience it would be impossible to duplicate by traveling the same distance in any other direction. The dangers of contracting malaria or any of the tropical diseases, if one observes the ordinary precautions, is very remote. All of the Central American countries present scenery, inhabitants, antiquities, trees, shrubs, flowers, fruits and birds that daily furnish new object lessons for the study of the visitor from the north. The gigantic trees, the flowering shrubs, the birds of song and plumage, the antics of the monkeys in the tree-tops, the humming of insects, the immense fields of the stately banana, the magnificent coffee plantations on the hillsides, with the dark shiny green leaves of the shrubs bearing the snow-white fragrant blossoms and the purple berries, can not fail in fascinating the thoughts of the traveler. The mixture of races and the habits of the people are studies in themselves. To the medical man the study of tropical diseases and climatic conditions are of special interest. He will find in all of the larger cities physicians well prepared and willing to give detailed information on these important subjects.

Last winter I visited Costa Rica and reported the results of my observations in the columns of THE JOURNAL; this year I selected British and Spanish Honduras as the objective points of my short midwinter vacation. Last year the trip was made in January, this year in February. In comparing my experiences, I have come to the conclusion that January is the best time to visit any part of Central America, as the summer here begins during the month of February, with a marked increase in the temperature.

BRITISH HONDURAS.

This is one of the smallest colonial possessions of Great Britain. Since it came under British rule it has been free from strife and rebellion. The colonial government is a wise and efficient one and insures justice to natives and foreigners alike. The whole population does not exceed 39,000, of which number the whites number only 800. Belize, the largest city and the seat of government, has a population of 10,000. The coast is low and swampy, the interior mountainous. The principal articles of export are mahogany, cedar and bananas.

PHYSICIANS.

The practice of medicine is regulated by a board of medical examiners composed of three members apointed by the government. Examination is compulsory. Applicants must present a diploma from a recognized medical college. At present there are only seven licensed physicians in the entire colony, one of them a woman, a graduate of the College of Physicians and Surgeons, Chicago. The most prominent doctors in the capital city are Drs. Eyles, Harrison and Heusner.

HOSPITALS.

The colonial government has made adequate provision for the indigent sick by the establishment of three hospitals. The Belize Public Hospital has 43 beds and at the time of my visit every bed was occupied and a number of cots furnished accommodations for the overflow. During the year 1899, 429 cases were treated in this institution. The two-story buildings are constructed of wood and the wards are fairly well furnished. The operating room is small but well lighted and supplied with the most necessary instruments and appliances for aseptic work. Dr. J. H. Harrison is in charge of the hospital and at the same time attends to the insane asylum, poor house and prison, which means hard work. For all of this he receives the pitiable salary of $1000 a year. Dr. C. H. Eyles, the colonial surgeon, for good reasons, takes great pride in the commendable fact that the colonial government sets aside 10 per cent. of the entire income for the medical department, something that can not be said of any other government in the world. The nursing in the hospital is done by colored women and two colored orderlies trained by Dr. Harrison. The first attempt to secure trained female nurses for the hospital was made in 1894. At first this was in the nature of an experiment, but as it proved to be successful the same plan has remained in force with the most satisfactory results. The female nurses remain in training for one year and when found satisfactory at the end of this time receive a salary of $7 per month and board and washing. The orderlies are paid from $240 to $180 a year. They assist in oper-

ations, dispense the medicines and do part of the nursing in the male ward. The scrupulous cleanliness of the wards, bedding, patients and halls speaks well for the nursing force of this institution.

Dr. Harrison is an enthusiast in his hospital work and chafes under the somewhat primitive conditions under which he has to labor. There can be no doubt but that under his wise and energetic administration the institutions will grow and improve in the course of time. Everything in Central America under the care of man moves slowly and the hospital work constitutes no exception. The public takes very little interest in charitable institutions and the entire responsibility rests in the hands of the government, which certainly has shown its liberality towards the medical department in a way that should humiliate more prosperous nations.

The two remaining hospitals have each a capacity for about sixteen patients, are located in the coast cities next in size to Belize and are likewise supported by the government and are in charge of competent physicians. From the above it will be seen that the government takes care of 75 sick poor and the whole number treated at public expense will reach annually in the neighborhood of one thousand patients.

What Belize needs is a small, well-equipped private hospital for the accommodation of foreigners and well-to-do citizens. The enterprising United Fruit Company and the prosperous merchants of the city should take the necessary steps in this direction, as such an enterprise would soon become self-supporting and would do away with one of the objections on the part of the travelers who visit this country, in case of acident or sickness.

INSANE ASYLUM.

On the same grounds and only separated a few yards from the public hospital, stands the insane asylum, occupied at present by 46 inmates, 31 males and 15 females. It is a one-story wooden building resting on piling five feet above the ground. The rooms are kept clean and patients are well treated and well fed. If a person is found insane he is admitted without any court proceedings. The prevailing type of insanity is melancholia, although the homicidal and suicidal forms and violent outbreaks are by no means rare. Dr. Harrison believes that alcoholism is the most potent cause in the production of mental disorders. Caribs, Indians and the mixed populations furnish the largest contingent of mental diseases. Drunkenness is very common. A cheap vicious rum made of sugar cane is the national drink among the common people.

THE PRISON.

This is a modern building surrounded by large grounds with palms and flower-beds and fenced in by a high solid stone wall. An English officer is in charge of the prisoners and enforces strict discipline. The treatment is humane. The cells are kept scrupulously clean and the food is excellent. Most of the prisoners are serving long time sentences and are employed in manufacturing mats and brushes from the fibers of the envelope of the cocoanut, shoemaking, tailoring and crushing stone. A few of them are engaged in printing. There has been in many years only one execution by hanging. The execution chamber is in the prison building and the trap is always kept in good working order. Corporeal punishment seldom becomes necessary, as was evident from the brand-new appearance of the different implements of torture that were shown us on our visit. The prisoners numbered 43, one, the most dangerous one, being an American. Most of them were committed for murder, robbery and stealing. The fact that only one woman was in confinement speaks well for the good behavior of the female population. This prisoner was a girl, 18 years of age, of doubtful racial origin, who awaited trial for stealing.

MIXTURE OF RACES.

British Honduras is a small country with a still smaller population, but it is one of the best places to study racial mixture. In visiting the market, the different places of business, and in observing the passers-by in any of the public thoroughfares, the visitor can see in a short time all shades of color from coal-black to the fairest of the fair, the short curly hair of the negro and the long, straight jet-black hair of the pure Indian. The Indian and the Carib represent the early settlers of the country. Then come the English, French, Germans, Americans, Spaniards, Portuguese and the American and Jamaica negroes and the mixtures arising from intermarriage between the different nationalities. The Carib maintains his identity more than the native Indian as he is opposed to intermarriage. He bears a strong resemblance to our negro and is undoubtedly of Ethiopian origin. The Indian mixes freely with all nationalities. The intermarriages which have taken place between the native Indian and the different white races since Columbus discovered this part of America and the invasion by that intrepid explorer Cortez have resulted in a mixture of races such as it would be difficult to find to the same extent in any other country. Such a mixture of races has its advantages and disadvantages. It is one of the means of spreading civilization, but leads at the same time to vice and disease. The natives of Central America have and continue to share the same fate that was meted out by the whites to the North American Indian. He is losing his right-

Mixture of races.

fully inherited landed possessions and has acquired from the European invaders more of their vices than their virtues.

PREVAILING DISEASES.

British Honduras, like all other Central American countries, has its share of malaria, the most prevalent disease. The lowlands along the coast are the breeding-places of the plasmodium. Many of the residents, foreign and native, who have lived for several years in malarial districts show plain indications of chronic malarial poisoning. The pernicious form and that complicated by hematuria are occasionally met; the quotidian type is the most common. Yellow fever has never had its origin here, the several epidemics which have scourged the country at different times could always be traced to cases coming from Cuba, Port Limon or South America, more especially Colon. Tuberculosis is prevalent among the Indians, Caribs and halfbreeds. The lungs are most frequently the primary seat of the disease, but glandular, bone and joint tuberculosis are by no means rare. The mixture of races has here, as elsewhere, been a potent element in the rapid dissemination of the disease. Pneumonia and rheumatism are most common during the rainy season. Dysentery and diarrhea occur at all times of the year and to them must be attributed the frightful infantile mortality.

The frequency of intestinal disorders can be accounted for by improper food, inadequate clothing, exposure to rain, prolonged heat and high atmospheric humidity. The maximum shade temperature is about 90 F., minimum, 56 F. Whooping cough invaded the colony in October, 1898, has continued to prevail from time to time and has contributed largely to the mortality of infants, and raised the death rate from respiratory diseases. Typhoid fever is a very rare disease here as elsewhere in Central America. The rarity of the disease in Belize may be attributed to the water supply as this is on the "separate" system, that is, to a considerable extent each house has its supply from a separate vat, the water being

rain water collected from the roof. A few years ago there were four cases of leprosy in British Honduras, at present only one.

Anchylostoma was reported for the first time in the colony in 1898. Since that time it has been frequently observed. I was given an opportunity to examine two cases in the Public Hospital. In both instances the disease was characterized clinically by puffiness of the face and pronounced anemia.

In Corosal "it was observed in selected cases that this worm was almost invariably present, associated with ascaris lumbricoides and oxyuris vermicularis"; and in Orange Walk the medical officer reports: "It is frequently encountered, and in responsible for much of the anemia prevalent among the Indian population." (Eyles.) Cases of beri-beri are occasionally seen both imported and indigenous. One case of this disease, the paralytic form, is in the public hospital at the present time. The patient is a woman of middle age. The muscles principally involved are the extensors of the hand and fingers.

(To be continued.)

Clinical Report.

A CASE OF ATROPIA POISONING, WITH HIGH TEMPERATURE AND RECOVERY.

L. L. BEEHLER, M.D.
CHICAGO.

The patient, aged 25, was a neurotic female. She has had scarlet fever, and had studied diligently for proficiency upon the piano from early life, and was subject to severe headaches since menses were established at 15. Her father died of tuberculosis; mother, of cancer of uterus. A sister had chorea; two sisters were exceedingly irritable.

She came under observation Jan. 14, 1902, complaining of gastric disturbances, headaches, languidness and general malaise. In about a week she said she was all right in regard to previous trouble, but complained of strange noises and delusions. She seemed conscious of these troubles and said she tried to avoid them, but found it impossible. She appeared then to be a neurasthenic of pronounced type. At that time her sister was told of the possibility of acute melancholia developing, which derangement occurred one week later. At the time of the melancholia developing, care was advised as to her being left alone on account of suicidal intent. She was put to bed, and during the absence of her sister who had been sent to get her a drink she swallowed three grains of atropin in four ounces of water given her by an oculist, who had given directions for five drops in each eye every hour. The patient was seen in less than twenty minutes after taking the drug. She was given strychnin hypodermically, grain 1/40, and dose was repeated in 15 minutes on account of countless thready pulse. Apomorphin, grain 1/10, repeated in 15 minutes, gave no result. In 30 minutes ¼-grain of apomorphin was given, with no result. Twenty grains of copper sulphate were given, with no result. A stomach tube was tried, but could not be passed, owing to constriction, which held the tube after striking the pharynx. Pilocarpin, the physiologic antidote to atropia, failed to produce any desired effect and was early discarded.

At 8 p. m. her pulse was 160, which dropped to 155 in 20 minutes. The nurse sponged the body with alcohol and water. She was later wrapped in hot towels, but diaphoresis could not be established. At 9, her temperature was 105 axillary, pulse 152. At 9:50, axillary temperature was 106, pulse the same as before. Apomorphin, grain ¼, was then given, but with no result. At this time, the peculiar red rash appeared, first on chest. This remained for three days. One hour later her temperature had dropped to 103.5, pulse 150. At this time she was catheterized and the urine saved. Analysis later showed: Amount, 4 ounces; sp. gravity, 1,016; slight amount of albumin. Atropin was found in urine four hours after ingestion. One drop of the urine dropped into the eye of the household cat produced mydriasis of pupil in five minutes. At 11:40, temperature had fallen to 101.8 axillary, pulse 150. At 3:40 a. m., pulse was 140, respiration 30, temperature 101. At this time patient seemed to be conscious when aroused and answered questions by shake of head. At 8:15 a. m., temperature had dropped to 98.8 by mouth, pulse 108, respirations 24. She was given one-fourth glass of milk and one dram of whisky, which she retained. At noon she urinated voluntarily and drank two-thirds of a cup of strong coffee.

Improvement was rapid up to the sixth day, with temperature normal, pulse 80, respirations 20. On the fourth day, her temperature dropped to 97, and there remained for one hour, but speedily retained its usual height under massage. On the fourth day also she started to menstruate, which at this time slightly aggravated the symptoms. Menses are usually absent in attacks of melancholia, and strange to say she menstruated two days longer than usual. The pupils were dilated before taking the atropin internally from the previous local eye treatment, hence nothing can be said in regard to them. They resumed their normal size, reaction to light and accommodation in sixteen days from ingestion of drug. Facial lividity, which is not seen as a rule except in imminent peril, was present from first and lasted two days.

The rise of temperature due to increased heat production from influence on nerve centers was combated by sponging. The fast heart due to paralysis of peripheral inhibitory nerves and to stimulation of heart and ganglia was controlled by the strychnia, which moderated it and produced a regular rhythm.

It is not possible in this case to state how long the temperature was 105 or 106 axillary, as the thermometer was not used until about one and one-half hours after the ingestion of the drug.

The Nemesis of the Placebo.—A famous French physician of the Second Empire is said to have given the following prescription to a hypochondriac patient who worried him:

R.	Aqua fontis	100	
	Ilia repetita	40	
	Eadem stillata	12	
	Hydrogeni protoxyd	0	32
	Nil aliud	1	25

One drop thrice daily. This elixir, it is said, cured a large number of neurotics about the court and in Parisian society. But it got the doctor into trouble at last through the indiscretion of a pharmacist. A *grande dame de par le monde*, as Brantôme would have called her, who had taken it for years with blind faith and unfailing success and recommended it to her friends as an infallible remedy for most human ailments, in an evil hour allowed herself to give way to the curiosity which proved the ruin of Eve. Consumed with eagerness to know the secret of the composition of the wonderful panacea, she submitted the document containing the mysterious formula to all the initiated whom she came across. At last she found one who revealed the fatal secret. What explanation the physician attempted is not recorded, but there can be little doubt that the outraged lady explained her attitude in language more picturesque than polite. A more modern instance of the nemesis of the placebo occurred not many years ago to a well-known practitioner in this country. He had a patient, a neurotic lady, as exacting as such patients can often be. He had at one time given her some opium pills, to which she became too much attached, and he finally decided to give her no more. On the following Sunday evening while sitting at table after dinner he received an urgent letter either to come at once or to send some more of the pills. He sent the servant to the surgery for a pill box, and there and then rolled some pills from the crumbs on the table. He received a grateful letter of thanks stating that the pills had produced the much-desired sleep, and asking for the prescription; this he declined, and was much pleased with himself on the whole. But his gratification was diminished a few mornings later when at 2 a. m. he was roused from sleep to send another supply.—*British Med. Journal.*

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CRITICISMS OF SOME SURGICAL TENDENCIES.

If a single writer had announced the discovery of certain undesirable tendencies in the workings of surgery and had offered criticisms thereon, it would not have awakened much surprise. When, however, during the past eighteen months, several men of high standing in the profession both in America and England have pointed out what they believe to be a tendency for general and special surgery to overstep its legitimate limits, it surely behooves the medical profession to look at the matter impartially but very carefully. For some time part of the profession has believed that there was too frequent recourse to operative measures, especially in the surgical specialties having to do with the nose and throat and with diseases peculiar to women. The too early and frequent use of obstetric forceps has been spoken of with disapproval. Resort to exploratory incision for purposes of diagnosis in intra-abdominal diseases has undoubtedly become too common. Such an operation should be performed in rare cases only. An operation is not a legitimate diagnostic measure, save in very exceptional instances. It should never be allowed to substitute for a lack of skill in applying legitimate diagnostic means.

In August, 1900, Frederick Treves,[1] in the address in surgery before the British Medical Association, said that there is some foundation for the impression that operations are becoming too frequent and that, while the value of exploratory incision is beyond question, it is impossible not to notice a tendency to resort too readily to this means of arriving at a diagnosis.

At the meeting of the same association, one year later, James F. Goodhart,[2] in the address in medicine, spoke still more emphatically in a similar vein. He said: "Throats and noses suffer terribly from this lust of operation that has beset the public, ears are now being swept into the panic and I incline to think that the only region of our art that preserves its proper decorum is that of ophthalmic surgery." Sir Felix Semon,[3] in two very able lectures dealing with the principles of local treatment in diseases of the upper-air passages, maintains that the frequency with which local interference is advised and practiced nowadays is unfortunately far in excess of actual requirements; that operations are performed wholesale where they are not needed; that operative proposals are being made and carried out on an extensive scale on the basis of some unproved theory; that the operative interference is often unduly severe and protracted in proportion to the smallness of the complaint for which it is undertaken. Coming from a man of good standing in the particular specialty of which he speaks, these criticisms can not be ignored.

Under the title of "Some Surgical Tendencies from a Medical Point of View,"[4] Reginald H. Fitz of Boston has written one of the most convincing articles bearing upon this matter. Speaking of exploratory laparotomies, which he thinks are too common, he says, "They are not without considerable danger and often disclose conditions which can not be relieved and which might have been appreciated without an operation. They tend to make the physician superficial in observation, since the diagnosis is to be made definitely by means of the operation." He has tabulated the cases of exploratory laparotomy performed in the Massachusetts General Hospital from 1890 to 1899. The table shows that while the percentage of deaths has grown somewhat less, being about 36, the cases which have been uncured or unrelieved remain at about 80 per cent.

The cases of cancer of the alimentary canal which were operated upon in the same hospital and whose subsequent history could be learned are also considered by Fitz; 54 per cent. died within a month and 72 per cent. within six months. Any considerable prolongation of life applied to less than 30 per cent. and to many of these the life was one of suffering and sorrow requiring the frequent or constant use of opiates to obtain any measures of relief. Of 10 cases operated on for intra-cranial tumors all were dead within eight months. He naturally questions the utility of operating in such cases.

William B. Coley of New York,[5] who is a surgeon, insists upon the necessity of a knowledge of the after-history of all operations in order to come to any conclusion regarding their value to the patient. He says that he has "personally observed at the Hospital for the Ruptured and Crippled many women with large and uncontrollable ventral herniæ resulting from operations that, according to the patients' stories, were performed for the relief of trifling uterine and ovarian symptoms with the result that in many cases the symptoms of the original trouble continued and in addition the patient suffered far more from the hernia that followed the operation."

Recovery from an operation does not make it a success. It is only useful when it makes life longer and more free from suffering. We can not better conclude than by quoting from Fitz: "Any operation which does not better the condition of the patient must be regarded as a therapeutic error. Progress in the future is likely to depend much more upon the discoveries which shall make surgery less necessary than to the opening of new fields for surgical treatment. The advance should be in the

1. British Medical Journal, Aug. 4, 1900, 284.
2. Ibid., Aug. 3, 1901, 269.
3. Ibid., Nov. 2, 1901, 1313, and Nov. 9, 1901, 1369.
4. The Medical News, Dec. 28, 1901, 1009.
5. Therapeutic Gazette, Feb. 15, 1902, 73.

direction of limiting those unnecessary and harmful operations, for the wisdom of the surgeon should serve as well to restrain him from operating as to enable him to operate successfully. Especially to be cultivated for this purpose are greater accuracy in diagnosis and prognosis and the more widespread knowledge of pathology and pathologic anatomy. The surgeon will thus become a better adviser although the number and variety of his operations thereby may materially be lessened."

SECOND ANNUAL REPORT OF THE HARVARD CANCER COMMITTEE.

In the second report of the Cancer Committee to the Surgical Department of the Harvard Medical School,[1] are given the results of a number of investigations bearing upon the parasitic theory of the origin of cancer. In the summary of the work given by Edward H. Nichols at the conclusion of the report, the plan of the investigations is made clear. Thus it has been claimed by the adherents of the theory of the parasitic origin of cancer that coccidium oriforme and other protozoa may produce a proliferation of epithelial cells analogous to that of carcinoma. This question was studied by E. E. Tyzzer, who devoted himself to an investigation of coccidium infection of the rabbit's liver. Tyzzer shows that the lesion of coccidium oriforme is essentially a chronic inflammation which in its progress and termination is not at all analogous to that of carcinoma.

It has been claimed further by the believers of the parasitic origin that the skin lesions of molluscum contagiosum characterized by epithelial proliferation, are due to the action of a so-called protozoön. Charles J. White and William H. Robey, Jr., carefully review the literature of molluscum contagiosum and report the results of an examination of several of the nodules found in this disease. The main conclusion is that the so-called molluscum bodies are composed of keratin which is produced by a strange metamorphosis of rete cells. The bacteriologic examination resulted negatively. At all events the lesions are not analogous to the processes observed in cancers.

Joseph D. Weis made a systematic study of a number of blastomycetes, including those which San Felice and Plimmer isolated from carcinoma, with a view to determine their proper place in the classification of yeasts and allied fungi. After going over the subject in the light of Klöcker's classification, which is accepted by the great Danish authorities Hansen and Jörgensen, he reaches the opinion that the so-called "blastomycetes" of San Felice and Plimmer are Torulæ. The subject is at present of too special an interest to be of much importance to physicians in general, but it has been evident for some time that systematic botanic study of the organisms generally referred to as blastomycetes by pathologists is highly desirable.

San Felice, Plimmer and others have claimed that by experimental inoculations of animals with blastomycetes true carcinomas may be produced. This question was studied by Edward H. Nichols by means of extensive experimental inoculations of animals with the blastomycetes of San Felice and Plimmer, and the sum and substance of this work are that the lesions produced by these organisms are nodules of granulation tissue, consequently not cancerous or true tumors in any sense. Blastomycetes are not constant in the malignant tumors of man. Hence there is no evidence that blastomycetes have anything to do with the production of human cancers.

The endocellular bodies of cancer cells, familiar to every student of the morphology of cancer cells, have been urged by many to be parasites, and the cause of cancer. Greenough finds similar "parasites" in non-cancerous disease of the mammary gland as well as in practically all cases of mammary cancer, but he did not find them in epithelioma and sarcoma. He regards them as the morphologic results of the secretory activity of the glandular cells and holds that there is no cause for regarding them as parasites.

The mere enumeration of the principal conclusions of these investigations shows that the present cancer parasite theory in whatever form it may be stated does not receive any trace of support. The Boston investigators reach conclusions that are diametrically opposed to those of the Buffalo investigators as formulated by Gaylord and Rosewell Park in publications of recent date. The history of medical science shows that frequently the development of knowledge is greatly furthered by diversity of opinion and controversy among investigators. We hope that the different conclusions of these two sets of investigators now engaged in the study of the nature of cancer may have this desirable result.

1. Journal of Medical Research, No. 3, vol. vii.

THE MEDICAL POLICE POWERS OF THE STATE.

In a recent issue a legal publication[1] takes up the question of the right of the state to compel citizens to undergo medical treatment in case of sickness in order to prevent their wilfully sacrificing their own lives or endangering those of others. It admits that the state can interfere for a child whose parents do not supply due medical care and whose welfare is thus compromised, but says that no court has as yet to its knowledge ruled on the question whether or not it can thus act for an adult. It is not a question of suicide, for, as it says, the Dowieite or Eddyite has no desire to die but does not believe in medical treatment, and the right of the state to prevent him seems to be in doubt in the legal mind. The fact that there are different schools of treatment legally recognized complicates the question; Eddyism, Dowieism, etc., have all a like standing with regular medicine in the estimation of many lawyers and judges. Shall the state dictate how the citizen shall save his life is what they ask: the question is apparently a puzzler to them and common law and statutes are apparently both lacking for its solution.

1. Chicago Law Register, April 9.

When, however, the case is one of contagious disease or such as in any way may imperil the community, law does seem to come to the aid of common sense to a certain extent. In the matter of compulsory vaccination it appears there is at least one decision recognizing it as appertaining to the police powers of the state. Against this, however, there are other decisions that violate both consistency and common sense as well as the principles of medical science. The legal writer in the *Law Register* does not seem to believe in compulsory vaccination and disagrees apparently with the Georgia decision above referred to. He says "to make a failure to get vaccinated a criminal matter requires an exercise of arbitrary power more dangerous to the state itself in the long run than to the individual upon whom it is first visited." He holds, nevertheless, that the closing of schools to the unvaccinated children is a rather different matter; it is only the withholding of a privilege and not an invasion of a right. "A negative rather than a positive punishment is permissible where the injury apprehended is at best only speculative and problematic." If this is good law, what shall we say to the decision of a State Supreme Court that ruled that the exclusion of unvaccinated children was permissible only when an epidemic existed, thus locking the door after the horse had had a good chance to be stolen. To a medical man it appears that the police power of the state is exercised in many unequivocal ways no more evidently necessary than compulsory vaccination. The right to bear arms is guaranteed in the Constitution, but a man is subject to fine and confiscation of his weapon if he carries a pistol in his pocket. It does no harm there, the possible danger is purely anticipatory, but it is more easily realized by the average man than is that from non-vaccination. The legal principle, however, is or ought to be the same in each case.

We can not pose as law critics, but, if we had to accept the definition given of law as the culmination of human wisdom, we would often have to think poorly of the latter. We go as far as anyone ought, we think, in our regard for personal liberty and are willing to admit, if it is so required, that any mature individual of average sanity who wishes to undergo Eddyite or Dowieite or any other treatment should be allowed to do so and take the consequences, provided that in so doing he imperils no one else. With the modern developments of our knowledge of disease, however, the range of possible danger from communicable disease is shown to be vastly greater than was formerly believed, hence the need of all the more precautions for the public safety. No man liveth or dieth to himself and the world is beginning to realize this fact more than ever with the modern germ theories of disease. Just how far the police powers of the state will go in the near future it is impossible to say, but there seems every probability that they will receive a wider interpretation by the courts than has been given them heretofore. The state has its duty to the public it represents, not only to check existing disease by measures within its power, but also to prevent it by any means which genuine science and experience have shown to be effective.

It is a noteworthy fact that, with a few insignificant exceptions, the active opposition to vaccination and other wholesome sanitary measures is led by quacks and off-color practitioners and their dupes—individuals whose occupation, under the salutary regulations now in force over the greater part of this country, is a direct active violation of the laws. It has come to be generally recognized that whoever undertakes to treat illness shall possess certain reasonable qualifications and statutes have been enacted to that end. It is chiefly the opponents and violators of such laws whose plea of injury to personal liberty and individual rights seems to have the respect of the legal editorial writer quoted above.

From his utterances and the Supreme Court decision referred to we are in some confusion as to what is good law in regard to the matter, but there is no doubt as to what is good common sense.

REORGANIZATION OF STATE SOCIETIES.

Probably few of our readers are aware that in nearly every part of the United States the movement for a better and more systematic organization of the medical profession is in progress. While some know that this movement is going on in their own locality or state, they can not very well know what is transpiring elsewhere, unless they are especially interested.

The officers of state societies, in many instances, have been stimulated to active work by the action taken and recommendations made by the American Medical Association at its last meeting, but there has been another potent and widespread influence—as some one expresses it, "organization is in the air." The large majority of the state bodies held their annual sessions during April and May, hence before the St. Paul session of the American Medical Association and consequently its action last June could not have been brought before them for action. Nevertheless, certain of the state societies, knowing that some action would probably be taken at St. Paul, appointed committees on reorganization last year, making it possible for some definite action to be taken this year. It is extremely gratifying to notice that of the two state societies which can take action this year, and which have already held their annual session—Tennessee and California—each has adopted a new constitution and reorganized in accordance with the recommendations of the national association. As reported in our "Medical Societies" column last week, the former adopted, with only two or three minor changes, the constitution and by-laws for the state societies just prepared by the Committee on Organization of the American Medical Association. The California State Society adopted a new constitution prepared by its own committee, but which includes the fundamental principles recommended.

The example set by these two states is likely to be followed by many others during the next five or six weeks, in which case we may look for practical results in this excellent movement much sooner than the most optimistic had hoped for.

It must not be lost sight of at this time that, while the adoption of a definite, systematic and business-like plan of organization is the first and most important step in the great scheme of organization, it is not the only work to be done. It is like adopting the architect's plan for a complete building, the work of putting up the building must follow and this will require time and energy, and—money. In the past we have been working without a definite plan, and there has been nearly as much pulling down as building up.

HAY'S REACTION FOR BILIARY ACIDS—A CORRECTION.

In THE JOURNAL of March 23, 1901, page 820, appears an editorial abstract of the work of Frenkel and Cluzet on the reaction with sulphur for the presence of biliary acids in urine and other fluids. "When sublimed sulphur—flour, or flowers, of sulphur—is added to urine containing bile, the sulphur immediately falls to the bottom." This reaction they termed Haycraft's reaction for bile, this being the name mentioned in connection with the reaction in Langlois and de Varigny's physiology. But it appears that the actual author of the reaction is Matthew Hay, professor of legal medicine in Aberdeen, and in a recent note Frenkel[1] makes the necessary correction. Professor Hay in 1886 inserted a note, describing the reaction in the second English edition of Landois' physiology, translated by Stirling (page 381), but the test was not described in the journals. Consequently the sulphur reaction for biliary acids should be known as Hay's reaction, the name Haycraft having become attached to the test through some error.

ANNUAL EXHIBIT OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

The Pathological Society of Philadelphia last year inaugurated the custom of holding an annual exhibition meeting, designed to illustrate the progress of pathology and to bring before the members in an objective manner pathologic subjects of contemporary interest. The second exhibit was held Jan. 9, 1902, and was largely attended. A list of the subjects presented occupies fifteen pages of the Proceedings of the Society (March, 1902) being composed of nearly three hundred items. Exhibits were made by over twenty individuals connected with the various laboratories in and about Philadelphia and they included gross and microscopic specimens in human and comparative pathology, cultures and slides of some of the bacteria which are especially interesting at present, and a series of blood preparations from the Pepper Laboratory of Clinical Medicine. The value of such an exhibit is manifold. As an educational factor among the physicians of the city where it is held, it must be of no little utility, and the possible good which may come from it to the body of medical students in a large medical center like Philadelphia should not be disregarded.

1. Jour. de Phys. et Path. gén., 1902, March 15, vol. iv, pp. 308-309.

THE GREGORY TESTIMONIAL BANQUET.

Last week nearly one-third of the members of the medical profession of St. Louis gathered in a testimonial banquet to one of their number who had just completed fifty years as a medical teacher. Dr. Gregory, the recipient of this honor, is an ex-president of the American Medical Association and has received many positions of honor and responsibility from his fellows, showing that he has always been held in high esteem. This fact is what prompted his confrères to show their appreciation of the man. It was not because he had done some great deed, nor because he was a great surgeon or a great scientist, but because he had been honest, faithful, hard working and unselfish during all these years of professional work. In honoring Dr. Gregory, the profession of St. Louis honored itself. This spontaneous exhibition of fraternalism shows a spirit that is typical of the highest and noblest there is in humanity. Such unselfish, brotherly and professional good-fellowship as that which prompted and carried out this affair shows a professional good-feeling that is always to be found among physicians whenever there is an opportunity to display it, although one can hardly believe it, judging from what one often sees on the surface. If there only were more of such gatherings among us they would help to do away with the petty jealousies and misunderstandings that are so liable to develop among medical men. We may not have too many meetings for scientific and educational purposes, but we certainly have too few social functions. Let us have more of them, even though we have to adopt some other excuse for them than to wait for some one to have taught or worked for fifty years.

RAILWAY EMERGENCY SUPPLIES.

One of the leading railroads in the middle west has initiated a practice that seems eminently proper and likely to be useful. Every freight and passenger train is supplied with an emergency medicine chest and packets and the trainmen are to be instructed in their use. It often happens that medical aid is not immediately available in cases of railroad accidents and if physicians happen to be present they are not always provided with the medicines and appliances that are desirable; hence the utility of first-aid packages and a supply of such drugs, etc., as are useful in cases of accident. The medicine chests for the passenger trains are naturally to be more complete and will contain a considerable variety of articles suitable for emergencies of sudden injury or sickness. On the freight trains the outfits are simpler and are accompanied with directions for their use. It is prescribed that whenever any of these packages have been opened or used that they be returned to the proper designated medical official of the road with a full account of the occasion of their use. Anyone who has had much railroad experience can recall cases where such provisions would have been most valuable for relief of suffering if not indeed for saving life. It is to be hoped that the example will be gen-

erally followed by transportation companies. On many of our inland and coast steamboat lines similar provisions would be of the greatest value and are altogether neglected at the present time. First-aid packages for injury should at least be provided on every passenger train and boat. This should be a legal requirement, the enforcement of which should be a regular part of the duties of the steamboat inspection and whatever corresponds to this on land. In one or two of the countries of northern Europe this is the rule and the example should be followed everywhere. The public, of course, does not like to be reminded of the possibility of the dangers of travel, and such provisions would hardly be included in the advertisements of a transportation company, but a general knowledge that it provided for them would not hurt it any in general estimation, but on the other hand would, we believe, advance its reputation and popularity with the traveling public.

GYNECOLOGY FOR THE INSANE.

The extremely favorable results claimed by A. T. Hobbs[1] from his practice of gynecologic surgery among the insane again brings up this oft-discussed subject. A series of 253 cases operated on is reported, extending over a period of six years, during which 1000 female patients were received at the hospital. As a result of these operations 101 women are reported to have been restored to mental health and the annual discharge rate of the women's side of the hospital advanced from 37 per cent. to 52 per cent. The discharge rate for men, 35 per cent., during this time has remained the same. With the exception of this introduction of gynecologic surgery the treatment for the insane under Hobb's observation has remained practically unchanged for a long period. Hobbs makes some detailed analyses of his operative work and its results upon different forms of insanity, but certainly with too little discrimination between *post hoc* and *propter hoc*—a discrimination that is peculiarly necessary in drawing warrantable conclusions from any treatment of insanity. The value to the state as well as to the individual of a recovery from insanity makes the trial of any promising method of treatment a matter of sociologic import, but there is another reason for taking a moderately favorable view of remedying pathologic conditions in the insane. It is recognized that individuals mentally deranged have sufficient capacity for realizing the pains and pleasures of life so that the same physical conditions which cause suffering in those of sound mind very generally cause suffering, though perhaps not definitely recognized nor localized by the patient, to these unfortunates. So far as pelvic lesions are concerned, they may or may not be the particular bit of stress which carries an unstable nervous organization over the border-line between sanity and lunacy; according to Hobb's figures they often are, yet whether they are or not the treatment of such lesions may be of considerable benefit to the patient. Even the least result attained in suitable cases must be some comfort gained for individuals whose external conditions are hard enough to endure without at the same time being obliged to suffer from remediable organic ailments. Certainty of improving the physical condition, probability of the improvement being reflected in better mental feeling and better behavior in some cases, added to the possibility of curing the psychical disease in a few, would seem to be inducement enough to warrant the introduction of properly controlled, competent, conservative gynecologic surgery in every hospital for the insane.

1. Amer. Journal of Obstetrics, February, 1902.

THERAPEUTIC VALUE OF THE CACODYLATES.

In a former issue of THE JOURNAL we suggested that the very favorable testimonials as to the value of cacodylic medication within the past year or so, ought not to be too implicitly accepted, but that they indicated that it deserved a judicial study.[1] These numerous testimonies as to its good effects hardly indicate in themselves such a study; they are generally *ex parte* observations, uncritical so far as any comparative trial with other forms of arsenical medication or chemical tests as to the actual efficiency of the basic drug. Dr. Thomas R. Fraser[2] in a paper read before the Edinburgh Medico-Chirurgical Society, March 5, reported some therapeutic tests by him of the cacodylate of soda which do not support the highly favorable reports of Gautier and others of its therapeutic efficacy. He tested it in cases of chorea, eczema, leukemia, and chlorosis, and found it practically ineffective as compared with other remedies. The cacodylate of iron was efficacious in chlorosis but this he holds was the effect of the iron alone. Three samples of urine were examined: one, as a control, to which liquor arsenicalis was added; one with cacodylate of soda oxidized in a special manner with mineral acids, and one with the cacodylate alone. Only the first two reacted to Marsh's test; the third showed no traces of arsenic. Fraser maintains that in cacodylates the arsenic is so thoroughly locked up with the methyl groups that to liberate it, prolonged oxidation with the mineral acids is required, and that therefore it can not be effective in the organism. The urine of patients being treated with cacodylate gave no arsenic reaction until after oxidation, when it was very marked. Fraser concludes from these facts that the arsenic in the cacodylates passes unchanged through the body. The action is analogous to that of cyanogen, which, while active in many of its preparations, enters into such stable combination in the ferro- and ferri-cyanids as to be entirely inert. The cacodylates, however, have their disadvantages; they irritate the gastro-intestinal tract, even when administered subcutaneously, and their long-continued administration is thereby seriously embarrassed. Fraser's results appear to have borne out completely his anticipations, as he says his investigation was prompted by his preconceived opinion of the inertness of these combinations. This fact may be utilized by the advocates of the cacodylic medication as affecting the value of his conclusions. Nevertheless, till they can be shown to be erroneous they cast a cloud upon the therapeutic value of these drugs.

1. THE JOURNAL A. M. A., Aug. 17, p. 455.
2. Medical Press and Circular, March 12, 1902.

MEDICAL JOURNALISM IN JAPAN.—We must realize that Japan is becoming one of the nations of the world. There are over thirty medical periodicals published in that country.

Medical News.

COLORADO.

March Mortality.—The State Board of Health report for March shows 783 deaths, an annual death rate of 15.78. Diphtheria caused 39 deaths; scarlet fever, 28; typhoid fever, 7, and smallpox 1.

Home for Needy Consumptives.—Charles L. Adams of Pittsburg, Pa., has given $30,000 for the erection of a home for indigent consumptives in Denver, and has promised to give $20,000 in addition conditional on the securing of a like amount.

Board of Health Sustained.—According to a decision just rendered by Judge Voorhees, a board of health, whether it be a state, county or city board, has absolute power to make rules and regulations governing the sanitary conditions of a community. This decision was given in denying an application made for an injunction to restrain the mayor and school board of Rocky Ford from preventing a child from attending school because she had not been vaccinated.

Instructions to Health Officers.—The State Board of Health has made the following suggestions to health officers:

In case of death from cancer, require a statement of the organ or organs involved in the process, or a statement as to whether the process was general.

In case of death from septicemia, peritonitis or hemorrhage in an adult female, require a statement as to whether it was puerperal in character.

In case of death from inanition, marasmus, mal-nutrition or dropsy, secure, if possible, a definite statement of cause.

In case of death from violence or poison, have the death certificate state whether it was suicide, accident or homicide.

In case of death from tonsillitis, spasmodic croup, or other suspicious disease of the throat, investigate as to the question of diphtheria, and require the certificate to show the facts.

Do not accept the statement of "heart failure" as a cause of death.

Death certificates are required for still births and premature births, provided the fetus is twenty-eight weeks old. In all such cases, be sure to see that the death certificate states whether the child lived.

DISTRICT OF COLUMBIA.

American Gastro-Enterological Association.—The fifth annual meeting of this Association will be held in Washington, May 1, under the presidency of Dr. John C. Hemmeter, Baltimore. A luncheon is to be given to the members by Dr. William Gerry Morgan.

In Memory of Dr. Johnston.—A public meeting was held, April 9, by the Medical Society of the District of Columbia, in memory of the late Dr. William Waring Johnston. Resolutions were adopted providing that a memorial pamphlet be published embodying the addresses made, an embossed copy of which shall be forwarded to the bereaved family.

Proposed School Inspection.—The Medical Society of the District of Columbia recommends the system of medical inspection of public schools outlined by the Commissioners. This inspection should be under the health officer and inspectors should be appointed after competitive examination. Pupils in the normal school should be taught to recognize the earliest manifestations of communicable disease, so that they can intelligibly co-operate with the inspectors.

ILLINOIS.

Fire Loss.—Dr. Ralph P. Dowd suffered a loss of about $1000, with no insurance, by the recent fire at Fisher.

Doctor Robbed.—A burglar at Springfield not only robbed the residence of Dr. Percy L. Taylor, April 15, but also forced the doctor and his wife to accompany him while he was securing such valuables as he desired.

Chicago.

Ex-Internes Feast.—The ex-internes of Cook County Hospital were the guests of Warden Healy, April 19. Dr. William E. Quine acted as toastmaster and toasts were responded to by Drs. John B. Murphy, James B. Herrick, Robert Bruce Preble, C. E. Kahlke, and John D. Robertson.

National Association of Trained Nurses.—This Association will meet at the Lexington Hotel during the first week in May. The management of Mercy Hospital and the Mercy Hospital Alumnæ Association of Trained Nurses have arranged a clinic to be given for the associations at the hospital by Drs. John B. Murphy, Arthur R. Edwards and others at 10 a. m., May 1.

Dunning Rules Revised.—At a meeting of the special Dunning committee it was decided to formulate new rules to govern the County Hospital for the Insane and the Poor Farm. The appointment of a medical director, head nurse and a business manager make this necessary. Drs. Frank Billings and Hugh T. Patrick, Julia Lathrop, President J. J. Hanberg, Commissioner W. K. Walker and J. E. Flannigan were appointed a committee for this purpose.

The Officer-of-the-Day Again.—The officers-of-the-day at the County Hospital have recommended: 1. That church services be held in the amphitheater. 2. That a ward be assigned for sick house physicians and attending physicians. 3. That an annual report be issued of the number of cases treated, the deaths, general information concerning the hospital and all data which would be of interest to the medical profession. 4. That the rule prohibiting profanity be strictly enforced.

New Hospitals.—The trustees of the Frances E. Willard Hospital are considering a proposition to acquire additional east frontage in Lincoln street, north of Harrison street, and to erect a hospital building to cost about $250,000. Bequests have been made for about $21,500, which leaves a little more than $228,000 to be raised.——Maimonides Hospital Association has been incorporated by Dr. Gustavus M. Blech and others.——Watts De Peyster Hospital and Home for Invalid Children has been incorporated.——Plans are being prepared for a six-story addition to Augustana Hospital to cost about $100,000.——Protests have been received by the building department of the city against the erection of hospital buildings by the Chicago Polyclinic at Oak Street and La Salle Avenue, and by Dr. Nathan E. Wood, at 617 La Salle Avenue.

INDIANA.

Central College of Physicians and Surgeons, Indianapolis, graduated a class of 8 at its twenty-third annual commencement exercises, April 17.

Banquet for Dr. Ferris.—The professional friends of Dr. Edgar S. Ferris, New Castle, who is about to leave for the east for a year of special study, tendered him a banquet, April 8.

St. Edward's Hospital, New Albany, recently erected at a cost of $90,000, was dedicated, April 8, with appropriate ceremonies. The hospital will be in charge of the Sisters of St. Francis.

Fined for Violation of Law.—Dr. Louis Lukenbill, Marco, was fined $10 and costs, April 14, for interfering with quarantine regulations in Vigo township, Green County.——Gideon Stevens, living near Stroh, La Grange County, plead guilty to the charge of practicing medicine without a license, and was fined $25 and costs.

Death and Disease.—The monthly report of the State Board of Health shows that there were 3045 deaths in March, the annual rate per 1000 being 14.2. In the corresponding month last year the number of deaths was 3272, the rate 15.3. Compared with the preceding month, there were 171 more deaths. Of this increase, 88 or almost 50 per cent. was of children under 15 years of age and 20 per cent. was of people over 65 years. Diseases which caused the increase in the number of deaths in March over February, were consumption, measles and puerperal fever. The deaths from important causes were: tuberculosis 457, typhoid fever 39, diphtheria 26, scarlet fever 18, measles 22, whooping cough 16, pneumonia 470, diarrheal diseases 9, cerebrospinal meningitis 21, influenza 59, puerperal fever 21, cancer 82, violence 127, smallpox 2. From influenza alone was the death rate higher in the country than in the cities, the rates per 100,000 being: cities, 26.1; country, 28.4. The violence death rates in 100,000 were: cities, 94.9; country, 41.2. Aside from smallpox the prevalence of diseases was in the following order: Rheumatism, bronchitis, influenza, pneumonia, tonsillitis, measles, intermittent fever, pleuritis, diarrhea, scarlet fever, erysipelas, typhoid fever, diphtheria, cerebrospinal meningitis, whooping cough, inflammation of bowels, puerperal fever, cholera morbus, dysentery and cholera infantum.

IOWA.

Keokuk College of Physicians and Surgeons held its commencement exercises, April 14, graduating a class of 64. On April 15 the alumni held their annual banquet, over which Dr. George F. Neff, Farmington, presided as toastmaster.

Hospitals.—Articles of incorporation of the Benjamin Hershey Memorial Hospital, Muscatine, have been filed.——The new detention hospital at Des Moines, erected at a cost of $13,000, is now ready.——Clark Hospital, McGregor, will be ready to receive patients, May 1.

Made Surgeon-General.—Dr. Henry Munson Dean, Muscatine, major and surgeon-general of the Department Command

of Iowa, Union Veterans' Union, has been appointed surgeon-general on the staff of the commander-in-chief, national command, of the organization, with the rank of colonel.

MARYLAND.

The Frederick City Hospital was formally opened on April 22. The state gave $5000 toward its erection and $3500 for two years for its maintenance.

The Medical and Chirurgical Faculty of Maryland held its annual meeting, April 22, 23 and 24. Dr. James Tyson, of Philadelphia, delivered the oration.

The Baltimore University School of Medicine held its annual commencement, April 15. Rev. Dr. Donald Guthrie delivered the oration, and Dr. E. Miller Reid conferred degrees on 31 graduates. A dental department is said to be in contemplation.

Alumni Association of the College of Physicians and Surgeons of Baltimore.—The annual meeting of this body will be held, April 28, at Baltimore. Dr. Samuel H. Allen, Provo City, Utah, will be the orator. The meeting will be followed by a banquet at the Hotel Rennert.

Medical Librarians' Bulletin.—The first number of the *Bulletin of the Association of Medical Librarians*, appeared in Baltimore, April 19. It contains "A Visit to the Hunterian Library at Glasgow," by Dr. William Osler, and "The Library of a Colonial Physician," by Dr. Cordell.

Personal.—Dr. Edward N. Brush, of the Sheppard and Enoch Pratt Asylum, sailed for Europe, April 23.——Dr. E. G. Ballenger, of the University Hospital, has been appointed surgeon of the Maryland Granite Company, and will reside at the quarries, Guilford, Howard County.——Dr. P. E. Stigers was appointed a pension examining physician at Hancock.

Lectures.—Dr. William Osler gave a lecture, illustrated by lantern pictures, before the Medical and Chirurgical Faculty, April 22, on "The Diagnosis of Smallpox."——Prof. J. Gaule, of the University of Zurich, Switzerland, lectured at Johns Hopkins Hospital, April 21, on "The Effects of Changes in Altitude Upon the Blood Corpuscles," with demonstrations of preparations.

Lazear Memorial.—The committee of the Medical School of the Johns Hopkins University, appointed to erect a memorial to the late Dr. Jesse William Lazear, who lost his life as the result of an experiment on the transmission of yellow fever, reports that sufficient money has been subscribed to erect a memorial tablet and to establish a library fund for the purchase of works relating to tropical diseases.

MICHIGAN.

No Quorum.—At the annual meeting of the State Board of Health, April 11, a quorum not being present, much important business waiting for this meeting could not be transacted. The members present had a long conference on important subjects, and conducted the examination in Representative Hall of 45 embalmers who were applicants for license.

Appeals to Supreme Court.—Peter Radebaugh, who represents that, upon the assurances of a member of the State Board of Medical Examiners, he located at Sturgis, intending to engage in the practice of medicine, has applied to the Supreme Court for a mandamus to compel the board to recognize the Miami Medical College of Cincinnati as a reputable college and to issue him a certificate entitling him to practice. He claims that the board is discriminating between reputable colleges.

Emergency Hospital Opens.—The building given to Grand Rapids by Dr. Louis Barth for an emergency hospital opened April 8. The hospital is supported by the sale of certificates, the holders of which are entitled to medical aid and a free bed in case of accident so long as needed. The annual fee for a certificate is $2, and should husband and wife in one family each hold tickets all children under 15 years of age are entitled to free service. Drs. L. A. Cottle and L. B. Hayden, of Boston, are in charge. No contagious diseases will be treated in the new hospital as planned at present, but all accidents and surgical cases will be received.

Mortality of Michigan.—There were 2959 deaths reported to the Department of State for the month of March, corresponding to an annual death rate of 14.1 per 1000, a slight increase over the rate for February, which was 14 per 1000. There were 495 deaths of infants under 1 year of age; 205 deaths of children aged 1 to 4 years, inclusive, and 912 deaths of elderly persons over 65 years. Important causes of death were as follows: Pulmonary tuberculosis, 200; other forms of tuberculosis, 21; typhoid fever, 41; diphtheria and croup, 33; scarlet fever, 37; measles, 34; whooping cough, 29; pneumonia, 385; influenza, 70; cancer, 119; accidents and violence, 147. The most marked features of the month were the increased numbers of deaths from pulmonary tuberculosis and the common diseases of children, scarlet fever, measles and whooping cough.

MISSOURI.

St. Louis College of Physicians and Surgeons held its commencement exercises, April 7. A class of 50 received diplomas.

Testimonial to Dr. Gregory.—A testimonial banquet was tendered Dr. E. H. Gregory by the profession of St. Louis, April 17, a fuller notice of which will appear in our next issue.

Barnes Medical College, St. Louis, graduated a class of 79, three of whom were women, April 10. Rev. John D. Vincil, chairman of the board of trustees, delivered an address; Dr. Meredith D. Jones was faculty valedictorian, and Dr. Abram M. Carpenter presented the faculty prize medals.

NEW YORK.

Personal.—Dr. Carl G. Leo Wolf was appointed health officer of Niagara Falls.——Dr. A. L. Chapen has been appointed police surgeon and Drs. F. Guillemont and W. P. Russell physicians to the poor at Niagara Falls.

Bars Patent Medicine Distribution.—The Oswego Department of Health, at its meeting, April 10, passed a resolution that no person be allowed to distribute patent medicine without permission of the Board of Health, and, further, that the chief of police be directed to carry out the order.

Cause of Diphtheria Infection.—Dean Estewen A. Fuertes, of the College of Civil Engineering, Dr. George A. Caldwell, and Dr. Veranus A. Moore, all professors in Cornell University, who were appointed by the State Lunacy Commission to investigate the cause of diphtheria which has been prevalent at the Willard Insane Asylum for some years, have found that the ventilation was imperfect, that germs of diphtheria were taken up to the garret by upward currents of air, and then either by changes in the direction of the wind or by the opening of windows in the lower floors these germs were distributed again through the building.

New York City.

Bequest to a Hospital.—By the will of the late William Whitewright, a well-known bachelor of this city, $50,000 is left to the Presbyterian Hospital.

Brokers to Endow Hospital Bed.—A movement is on foot in the Stock Exchange to endow a hospital bed in order to meet the frequent demands made upon the members for assistance for sick and disabled employes.

Dr. Alvah H. Doty, Health Officer of the Port of New York, has received from the directors of the Pan-American Exposition at Buffalo a gold medal for his exhibit on sanitation which consisted of models of boats, quarantine plant, islands, with photographs and other material.

New Hospital for the Bronx.—Governor Odell, on April 14, signed the bill authorizing the construction of a new hospital in the Borough of the Bronx. It directs the Sinking Fund Commission of the city to have bonds issued for $200,000 to be used in acquiring the site for the proposed structure and for $300,000 for erecting and equipping the building.

Mortality of Greater New York.—The report of Registrar Guilfoyle to Commissioner Lederle, of the Board of Health, for the first quarter of the present year, shows 18,364 deaths, as compared with 18,575 deaths for the first quarter of 1901. This is a rate of 20.22 per thousand, as against 21.01 per thousand for last year. There was a decrease of 282 deaths from consumption, an indication that the measures instigated by the Department are bearing fruit.

The City Tuberculosis Hospital.—The hospital for persons having pulmonary tuberculosis, started by the city authorities on Blackwell's Island last February as an experiment, is reported to be doing good work. In all, 273 patients have been received, about fifty of whom were practically in the very last stage of the disease. About an equal number had the disease in an advanced form. There have been 76 deaths, while 50 patients have been discharged greatly improved. There are now 114 patients, forty of whom are in the later stages.

More than a Million Needed for Isolation Hospitals.—President Lederle of the Board of Health has transmitted his estimate of the amount required by his department for repairs, alterations and new buildings for the contagious disease hos-

pital service of the five boroughs. For the Borough of Manhattan, $600,000 is required; for Borough of the Bronx, $100,000; for Borough of Brooklyn, $125,000; for Borough of Queens, $100,000; for Borough of Richmond, $50,000, and for North Brother Island, $50,000—in all, $1,025,000 is needed.

Unlicensed "Nature Curer."—"Doctor" August F. Reinhold, the proprietor of a "Nature Cure" sanitarium, has been brought into unpleasant notoriety by the death in his establishment of a fourteen-year-old girl, temporarily boarding there. Though the autopsy ordered by the coroner declared that death had resulted from valvular disease of the heart and pulmonary edema, it is thought that the cold baths given her by Reinhold when she became ill hastened her death. Although it is said that Reinhold circulates literature, bearing his name as author, and having appended the titles Ph.D. and M.D., Reinhold admits that he is not a registered physician.

New Entrance Requirements.—The plan for advancing the standard of requirements for entrance to the College of Physicians and Surgeons has been completed and has received the approval of the University Council. Heretofore any one who had a Regents' forty-eight-count medical student's certificate could enter the first-year class in the college. A student who has only thirty-six counts may enter, but must make up the remaining twelve before the close of one year. The new plan provides that after July 1, 1902, no student who does not have the full forty-eight counts will be admitted. The most important provision of the new plan will go into effect July 1, 1903. By its terms no student will be admitted to the school who has not secured his certificate in one of these two ways: 1. By having successfully completed one full year's course in a college or scientific school of the United States, or an equivalent course in a European institution. 2. By passing an entrance examination conducted in June of any year by the College Entrance Examination Board, or in September by Columbia University.

Buffalo.

Personal.—Dr. Roswell Park will deliver the address at the anniversary exercises at Yale Medical School, June 24.——Dr. Charles G. Stockton has returned from a trip to the Orient.——Dr. Charles Cary is visiting in the East.——Dr. Edward J. Meyer, who was obliged to go to Florida for his health a few weeks ago, has returned, greatly benefited by the change and rest.

Ventilation of Schools.—There has been much just criticism concerning the ventilation of Buffalo schools, especially those of most recent construction. In these buildings recently erected the city has expended large sums for a ventilation system installed by a local firm, and after examination it is now found that the system is not efficient, so that in the construction of the new West Side High School, Professor Woodbridge, an expert from Boston, has made plans for a far less expensive and more efficient ventilation system.

Infection by Barbers.—The health ordinances for the prevention of the spread of disease through the medium of barbers' razors and other appurtenances to the trade in barber shops is to be rigidly enforced. The ordinance requires that the razor shall be sterilized before it is used on each customer, compels the barber to provide a fresh clean towel for each customer and prohibits the use of alum in such form that the same alum comes in contact with more than one face. The barbers are also required to wash their hands before shaving each customer.

PENNSYLVANIA.

Memorial to Dr. Onstott.—The McKee's Rocks Medical Society held a special meeting, April 5, at which resolutions of sorrow and sympathy regarding the death of Dr. J. W. Onstott were unanimously adopted.

Damage Suit Settled.—The suit for $50,000 damages, brought by Andrew J. Miller against Dr. Samuel L. McCarthy, Altoona, for malpractice, whereby it was alleged that plaintiff lost his right arm, has been settled by mutual agreement.

Personal.—Dr. H. B. Lockhead has been added to the house staff of Pittston Hospital.——Passed Assistant-Surgeon Raymond Spear, U. S. N., of Norristown, has received the thanks of the Colombian government for valuable services rendered to wounded Colombian soldiers during the recent revolution.

Bryn Mawr Hospital Enlarged.—The Garrett Memorial wing of Bryn Mawr Hospital was opened to-day with appropriate ceremonies. The capacity of the hospital is doubled by this addition. The Garrett memorial wing was erected to the memory of William E. Garrett, Jr., who, before his death, gave to the hospital the operating room. It contains twelve rooms and has been furnished by the donors at a cost of $10,000. The wing is for private patients only.

Philadelphia.

Dinner to Dr. Turner.—On the evening of April 13 Dr. Charles K. Mills gave a dinner, at the University Club, in honor of Dr. William Alden Turner, of London, the well-known neurologist, and of his brother, Dr. Logan Turner, the laryngologist. The distinguished guests are sons of Sir William Turner of London.

Sanatorium for Incipient Tuberculosis.—The trustees of the Rush Hospital for Tuberculosis have recently bought, for a country branch, a farm of 47 acres in Chester County. The land is elevated, and is thought to be favorably situated for the treatment of incipient cases. If the treatment proves successful cottages will be erected.

Personal.—Dr. William M. Thompson recently sailed from New York for London. He will visit many of the hospitals abroad.——Dr. John B. Deaver, accompanied by Drs. A. E. Wilcox and G. G. Ross, resident physicians of the German Hospital, were passengers on the *Kronprinz Wilhelm*, for Bremen, April 8. The party will be abroad about two months, visiting Halberstadt, Heidelberg, Paris and London.

Bequests.—By the will of Mrs. Mary A. Allison $5000 is left to the Methodist Episcopal Hospital, and $2500 to the Presbyterian Hospital.——The will of Owen Lamb, after bequeathing $500 to each of several Catholic institutions, including St. Joseph's Hospital, devises his residuary estate, estimated at $50,000, to the Sisters of St. Francis, for the support of St. Mary's Hospital and to the Society of St. Joseph, for the maintenance and education of poor orphan children.

Death of Pioneer Masseuse.—Jessie Miller Ward, the first in the country to teach massage upon a scientific basis, died April 6, at the Presbyterian Hospital. After two years of study at the Women's Medical College, ill health compelled Miss Ward to turn her energies in another direction. She attained distinction in this valuable branch of therapeutics. For some time she had been giving courses in massage at some dozen leading institutions of the city, and was the author of a valuable text-book on the subject.

Municipal Hospital Management Endorsed.—At a business meeting of the County Medical Society, April 16, which was largely attended, the constitution was revised, a number of new members was elected, and, on motion of Dr. E. E. Montgomery, the following resolutions were unanimously adopted: "*Resolved*, That the Philadelphia County Medical Society heartily endorses the administration of the Municipal Hospital of Philadelphia during the smallpox epidemic." "*Resolved*, That it commends Dr. William M. Welch and his able corps of assistants for the efficient and thorough manner in which every detail of the arduous and responsible work of that institution is, and has been, carried forward."

GENERAL.

Leper Settlement Undermined.—It is reported that the peninsula of the island of Molokai, Hawaii, on which the lepers live, is undermined by the sea for some distance. The lepers are alarmed and the superintendent will investigate.

Nine Hundred Cholera Deaths.—The total number of cases of cholera in the Philippine Islands up to April 20 was 1244, of whom 902 died. In Manila alone there were 388 cases and 300 deaths. The commission has passed laws authorizing municipalities to appropriate funds for the extermination of epidemic diseases.

Smallpox.

California: Stockton schools were closed, April 12, on account of the reappearance of smallpox.

Colorado: The State Board of Health has devoted considerable energy to tracing the source of infection of the 254 cases of smallpox reported during March. Their report shows that of these cases, 197 originated in the town or country from which each was reported, 41 came from other counties or adjoining territory, 7 had an origin that could not be ascertained, and 9 came from outside the state. Among the latter were 3 cases from Kansas, 2 from Missouri, and 1 each from Michigan, Wyoming, New Mexico and Nebraska.

Connecticut: The report of the State Board of Health announces that smallpox is still occurring sporadically in several towns, but is epidemic only in Waterbury. As an illustration of the possible control of the disease, it is reported that, except in Waterbury, it has been limited to one case in five other towns and to two cases in the other two towns in which it has

appeared. Its greater spread in Waterbury is due to the large number of unvaccinated persons, the large foreign population, and the greater facilities for concealing the presence of the disease until many have been exposed to it. The disease was reported during March as follows: Berlin, 1; East Windsor, 1; Putnam, 1; Southbury, 1; Stamford (city), 2; Thomaston, 1; Waterbury, 23; Windsor Locks, 2. Total, 32 in 8 towns.

Illinois: East Galesburg reports a new outbreak of the disease with three cases. The parents of the children affected are among those who do not believe the disease is smallpox.—— Chicago: The Department of Health reports that smallpox, which has heretofore been very mild—only one death in 139 cases since January 1—is taking on the old-time typical form, with pronounced initial symptoms, profuse eruption and high secondary fever. Five out of the eleven cases discovered during the week, including one from Iowa and one from New Jersey, were of this type.

Indiana: Smallpox was the most prevalent disease in March, 785 cases being reported as follows: Jay County 12, Hendricks County 2, Union County 1, Porter 1, Montgomery 41, Howard 3, Noble 46, Cass 4, Carroll 1, Shelby 37, Lawrence 12, Dekalb 1, Wayne 2, Vermillion 1, Morgan 1, Martin 1, Dubois 20, Wabash 16, Delaware 17, Clay 19, Warrick 61, Madison 64, Whitley 4, Clark 5, Gibson 22, Owen 1, Wells 81, Tippecanoe 1, Floyd 2, Lagrange 16, Perry 10, Posey 2, Allen 13, Vigo 6, Daviess 29, Vanderburg 54, Franklin 40, Adams 55, Knox 44, Marion 64, Grant 20, Greene 5, Spencer 2, Henry 2, Miami 3, and Benton 1. The two deaths reported from smallpox during the month were one each in Montgomery and Shelby Counties.

Iowa: The legislature has enacted a law which empowers the board of supervisors to levy on each city or incorporated town the expense of the quarantines. The city or township in which a case of smallpox originates will have to bear the expense of quarantine. The county treasurer is protected by granting the board of supervisors discretionary power in regard to accepting contracts made by local boards of health. If the supervisors decide that a contract made by the local board of health in smallpox cases is not reasonable or just they can repeal it. The State Board of Health is given power to enforce quarantine and vaccination regulations and rules when local boards fail to do so. Police and peace officers in the state, when called upon by the State Board of Health to enforce such rules and regulations, must execute the orders of the board, and the expenses shall be paid by the local boards of health. Any person affected with smallpox may be removed to a separate house or contagion hospital, and if it is impossible to so remove such person he may be cared for at his home, the removal of affected persons to be made after an application has been made before a magistrate. The removal shall be made under the direction of the local board of health.

Maryland: There are several mild cases of smallpox in Caroline County.

Michigan: Smallpox was reported present at 157 places in the state during the week ended April 5. Three deaths occurred from smallpox during March, 1 in Escanaba City, 1 in Clio village, Genesee County, and 1 in Chesterfield township, Macomb County.

New York: At a recent meeting of the New York State Medical Association, Dr. S. Dana Hubbard, in discussing the increased prevalence of smallpox in the United States, made the following assertion: "In my opinion the country has been reinfected with smallpox from the Philippines in the last two or three years."

Ohio: Miamisburg is said to have 56 cases of smallpox; Scio has 8 cases; Laceyville one case, and 6 cases in the Fayette County Children's Home near Washington Court-House. A conference of the state boards of health of Ohio, Illinois, Kentucky, Michigan and Indiana for the discussion of means of checking the smallpox epidemic was held in Indianapolis on April 25.

Pennsylvania: Superintendent Geary, of the Philadelphia Hospital, has announced that the quarantine against visitors on account of smallpox, which has been maintained since last October, has at last been raised. It is thought that the danger from the disease has so far abated as to render such restriction unnecessary, not only at this hospital, but at others as well.

South Dakota: It is announced that 207 persons were vaccinated at the Green Front Theater in Deadwood, April 13. The place is a variety house and dance hall, and a case of smallpox was discovered there. Four doctors and the sheriff performed the operation. Five men who objected spent the night in jail. This action is in conformity with a recent order of the Board of Health requiring all persons to be vaccinated, and it is to be extended to all public resorts where there are large numbers of people. The doctors have gone through the public schools and teachers and pupils were vaccinated.

Texas: The State Health Department has been advised of the existence of considerable smallpox at Beckville. State Health Officer Geo. R. Tabor left at once to investigate.

England: The smallpox epidemic in London continues. The deaths from the disease up to April 5 numbered 1015. They are classified according as the cases had been vaccinated, unvaccinated, or revaccinated. Of those who had been vaccinated 534 died, and 398 unvaccinated died. Of the 534 vaccinated cases 427 had been vaccinated in infancy, and only one of these was noted as having been imperfectly vaccinated. Under the age of 10, 414 were vaccinated and over that age there were 20. As against the claim that the efficacy of infant vaccination is spent, not one death of a person who has been revaccinated is recorded within the last ten years, in spite of the universal prophecy to the contrary.

CANADA.

New Chairs for Laval University, Quebec.— To commemorate the jubilee of Laval University, Quebec, in June, old scholars will contribute to the establishment of several new professorships. Already over $10,000 has been offered. Dr. A. G. Belleau, of Quebec, has given $1000; Dr. Arthur Vallee and Dr. Rosseau $500 each.

Government Bacteriologic Station.—For the past three years the Department of Agriculture has been maintaining a station at Outremont, near Montreal, where scientific observations have been made regarding tuberculosis in cattle. The minister has ordered the station to be closed and the bacteriologist in charge, Dr. Higgins, has been transferred to the cattle quarantine staff at Ottawa. These investigations will henceforth be conducted at Ottawa. It is likely that the researches will be extended to tuberculosis in human beings.

Montreal Western Hospital.—On Tuesday afternoon of last week the quarterly meeting of the board of governors of this institution was held. Dr. H. L. Reddy, one of the attending staff, resigned, and was subsequently appointed to the consulting staff. Dr. W. Grant Stewart was appointed to succeed him. The report of the committee of management was read by the secretary, Dr. Alex. Macdonald. During the first three months of the year there have been treated 43 medical cases, 58 surgical and 30 gynecologic cases, or a total of 131, as compared with 102 in the corresponding period of 1901.

To Help Women Inebriates.—The Local Council of Women at Ottawa have adopted a resolution asking that the government establish cottage homes for inebriate women. They state that in their city of Ottawa intemperance among women and girl prisoners has increased to the alarming extent of 75 per cent.; and that women in many cases under or about the age of 20 have been incarcerated for drunkenness or for crimes committed while under the influence of drink. Imprisonment to check this evil has proven an utter failure as there are women in a brief life of 40 years who have spent 20 years in jail.

Laws Upon Sending Patients with Infectious Diseases to Hospital.—At a meeting of the Montreal Hygienic Committee held last week, Alderman Ames brought up this question. He stated he had collected legal advice on the matter and the city attorney had stated that if a patient is residing in a hotel, boarding house or tenement containing more than one family, a vessel, railway car or carriage, the sanitary authorities are empowered to remove that patient and place him in a hospital, but this is not the case when a patient resides in a self-contained house. The Provincial Board of Health at Quebec will no doubt be asked to give the local board power by by-law to enforce the removal of smallpox patients.

The annual convention of the Canadian Association for the Prevention of Tuberculosis was held at Ottawa, April 17 and 18. Hereafter there will be a permanent central organization at Ottawa, and an efficient paid secretary will be appointed. There are said to be at the present time in Canada between 30,000 and 40,000 consumptives, the average number of deaths yearly totaling 9000, or one in every 650 of the population. It was recommended that the Federal and Provincial Governments should grant aid toward preventive measures and that measures should be taken to guard against the importation of immigrants suffering from tuberculosis. The following were the officers elected: President, Mr. W. C. Edwards, M.P.; secretary, Dr. H. B. Small, Ottawa.

The Question of Diseased Immigrants.—We referred last week to the warning of the United States immigration officials concerning those refused admittance to the United States. During last week this vexed question was up for discussion in the Canadian House of Commons, and it was denied that many of these are allowed to remain in Canada. The Minister of the Interior, under whose control is immigration, referred to the extravagant statements which had been circulated in this connection and illustrated by saying that an investigation had been made into the published statement that there were 200 diseased immigrants in the hospitals of Montreal. The report sent in by the superintendent of Notre Dame Hospital of that city showed that there were two cases in January, two in February and six in March. There had been none in the Royal Victoria Hospital for six months, or in the Montreal General for three months, and in the Hotel Dieu there were seven. Of 25,000 persons who came into Canada 132 were rejected by the United States commissioners as undesirable, and of these 132 there are now 29 in Canada.

Personal.—Dr. H. H. Sanderson, of Windsor, Ont., has gone to London, Eng., where he will take a special course in the hospitals. He will continue his studies in Berlin before returning. ——Dr. David Shirres, of McGill University, has been appointed professor of nervous diseases at the University of Vermont.——Dr. Charles Sheard, Medical Health Officer, Toronto, and Dr. H. B. Anderson, editor of the *Canada Lancet*, have returned home after spending a holiday in New York.——Dr. Graef, of Vancouver, is attending the New York Post-Graduate Hospital, doing special work on the eye and ear. He will shortly leave for England to further prosecute these studies. ——Dr. T. H. Morgan, Trinity '97, has been appointed an assistant in Dermatology at the New York Post-Graduate Medical School.——Dr. A. E. Randall, of Truro, N. S., is collecting a Muir memorial hospital fund in memory of the late Dr. Muir.——It has been lately currently reported that Colonel Neilson, director-general of the Army Medical Service of Canada, was to resign to be succeeded by Dr. Fiset, of Quebec. This has received official denial, Dr. Neilson having been granted leave of absence for a few months, Dr. Fiset acting temporarily.

FOREIGN.

The American Hospital in Mexico City treated 61 patients in March and discharged 33. Three died and 4 operations were performed.

French Must Vaccinate.—Vaccination is now obligatory in France within the first year from birth, and must be followed by revaccination at the ages of 11 and 21.

Prophylaxis of Tuberculosis.—The German central committee has ordered 150,000 copies of its pamphlet on tuberculosis to be distributed in the public schools.

Germans Buy Goats.—Tuberculophobia in Germany is causing the importation from Switzerland of many goats to replace cows as a milk supply, since goats seem so rarely susceptible to tuberculosis.

Argentine Plague Mild.—There is no alarm over the outbreak of plague at Buenos Ayres, Argentine, the cases are few and not severe, and the president of the sanitary department does not apprehend a spread of the disease.

Abolition of Compulsory Vaccination.—By a recent act of Parliament, vaccination is not compulsory in South Australia for a person (or the parent of a child) who makes a sworn declaration to his belief that vaccination would be prejudicial to health.

Russian Supervision Over Advertisements.—A certain widely-advertised disinfectant for the mouth has proved to be without antiseptic properties, according to the Russian authorities, and consequently papers are prohibited from accepting its advertisement except with the sole claim that it is a cosmetic for cleansing the mouth.

Many Lepers in Nicaragua.—The newspapers of Nicaragua are warning the people against the danger from leprosy. They say that fifteen years ago there were about 200 lepers in the country and now there are nearly 2000. These are allowed to go about anywhere and beg, and the papers declare the disease is spread by incidental contact.

Gift to Aberdeen Infirmary.—The Royal Infirmary at Aberdeen, Scotland, has received a gift of $150,000 from Lord Stephen, who had previously paid a debt of $125,000 which was hanging over that institution. Lord Stephen was formerly president of the Canadian Pacific Railroad and the famous mountain peak of the Canadian Alps is named after him.

Mexican Tuberculosis.—According to *El Imparcial*, Dr. Eduardo Liceaga has published a complete record of statistics of mortality caused by tuberculosis in the City of Mexico, during the 32 years from 1869 to 1900. The deaths in 1869 were 7447, and in 1900, 19,272. Mortality has nearly tripled therefore. Deaths in the last decade are almost double the number in the first decade.

New Chinese Hospital.—On December 7 the Elizabeth Shelton Danforth Hospital was opened at Kiukiang, under the Methodist Central China Mission. The two physicians, Drs. Stone and Kahn, had 7854 out-patients in the preceding twelve months. Their new facilities include a glass operating room, and modern equipment for distilling, sterilizing and microscopic work. The English and American consuls made addresses.

Deaths Abroad.—Dr. M. Piza, of Hamburg, one of the most prominent and devoted members of the executive committee of the national Aerztevereinsbund, has died.——The death of the Russian psychiatrist, Professor I. Balinski, is also reported from St. Petersburg, and of Crouzat, professor of obstetrics at Toulouse.——Professor R. N. Bruzelius died recently at Stockholm in his 71st year. His tastes inclined him most to laryngology and zoology, but he was physician-in-chief at the Serafimer Hospital.

Death of Hans Buchner.—Munich has lost another prominent medical man, following close on the death of von Ziemssen. Professor Hans Buchner died, April 5, of tuberculosis of the lungs, in his fifty-third year. He was at first a military medical officer until called to take Pettenkofer's place at the head of the Institute of Hygiene. He still maintained his connection with the army as surgeon-general "a la suite der armee." He was born in and spent most of his life in Munich. Among his latest contributions to science is his work on the prolonged local application of alcohol for inflammatory processes.

Charlatans in Berlin.—The recently-published statistics for 1897 state that there are 476 medical charlatans in Berlin, that is, one to every 4.6 physicians. Out of 123 male charlatans, 20 per cent. had been previously servants or day laborers; 40 per cent. artisans and only 24 per cent. from classes which presuppose an education above the lowest grades. Out of 125 women charlatans, 58 per cent. had been servants; 10 per cent. working women; 4.9 per cent. attendants on the sick, and 1.6 per cent. without previous occupation. The *Deutsche Med. Woch.* states that, whereas the population of Berlin has increased by 61 per cent. since 1879 and the number of physicians by 102 per cent., the number of charlatans has increased by 1567 per cent.

LONDON LETTER.

The Smallpox Epidemic.

The number of cases under treatment in the metropolitan hospitals, which had been 1542, 1567 and 1526 in the three preceding weeks, has declined still further to 1522; 376 fresh cases were admitted, against 450, 449 and 389 in the preceding weeks. The deaths from the disease, which had been 81, 53 and 61 in the preceding weeks, were only 54 last week. Since August 10 last, when the epidemic began, 5925 cases have occurred. Of these, 3712 have recovered, and 931 have died.

Leprosy in South Africa: Hutchinson's Conclusions.

Mr. Jonathan Hutchinson, whose departure for South Africa to investigate the mode of diffusion of leprosy we announced in THE JOURNAL, has returned and made a highly important communication to the *Times*. Later his researches will probably be communicated at greater length to the Royal Medical and Chirurgical Society. In addition to the large leper asylums on Robben Island (Cape Town) and at Emjuayua (Tembuland), he has visited many districts where the disease occurs, in order to investigate the domestic conditions of lepers. His inquiries establish the fact that the disease is very sparingly scattered over the whole of South Africa, and is by no means abundant anywhere. It chiefly affects the colored races, but a certain number of cases are to be found among the Dutch farmers. It was probably a new disease when the first cases (in members of the latter class) were recognized near to Cape Town 150 years ago. Since then it has gradually spread from the Cape Town district over the whole British territory, including the newly-annexed colonies of the Transvaal and the Orange Free State. In Natal it was a new disease as recently as 60 years ago, and is still met very sparingly. In Zululand it is as yet almost unknown. Mr. Hutchinson concludes that

the primary cause of the disease is the use as food of badly-cured saltfish. Such fish is prepared at Capetown and various places on the south and west coasts, and is sent inland in large quantities. While believing that this has been by far the chief agent in its diffusion, Mr. Hutchinson thinks that he has obtained conclusive evidence that leprosy may, in very exceptional circumstances, be communicated from person to person. He does not believe that it is either infectious or contagious in the proper sense of these words, but that it may be communicated by eating food contaminated by a leper's hands. This mode of transference can obviously occur only under the most careless conditions as to taking food and hence the explanation that the disease never spreads in leper asylums or in well-civilized communities, while it does so in Hottentot and Kaffir kraals. Its introduction into these kraals is usually effected by some laborer who has been into Cape Colony to work and returning home with the seeds of the disease has become a source of this kind of food contamination in his native place. The measures suggested for the prevention of the disease are first (and by far the most important) the legislative control of the fish-curing establishments; secondly, the diffusion of information as to danger of communication; and, thirdly, the establishment of small isolation homes into which lepers should be induced to go during the stage involving risk. Thus Mr. Hutchinson, as the result of his investigations, reaffirms the "fish-hypothesis" of the origin of leprosy—a doctrine which he has strenuously and persistently maintained for many years in the face of almost universal opposition of all the other authorities. He has also, against the general view, insisted that leprosy is not in the ordinary sense a contagious disease, pointing out that although a number of lepers live in England and mix freely with the population no case of contagion has ever been observed. This peculiar method of contagion from leper through food is a new hypothesis, but it in no way invalidates (on the contrary, it confirms) Mr. Hutchinson's view of the non-contagiousness of leprosy in civilized life.

The Medical Profession in 1902.

The total number of practitioners for 1902 is 36,788, an increase of 434 over the total of 1901, which was 36,354. There are 6292 names on the London list, and 16,232 on the English provincial list. Scotland possesses 3645 medical men, as against 3569 in 1901, being an increase of 76; Ireland possesses 2587 medical men, as against 2575 in 1901, being an increase of 12; and Wales possesses 1183 medical men, as against 1165 in 1901, being an increase of 18. The registered medical practitioners abroad and of members of the naval, military and Indian medical services show a small increase upon the numbers of last year. The foreign and colonial names in 1901 numbered 3910, and this years number 3952, or an increase of 42; the members of the services in 1901 numbered 2798, and this year 2886, or an increase of 88.

The Campaign Against Malaria.

The Liverpool School of Tropical Medicine, which has organized a number of expeditions for the investigation of malaria in various parts of the empire, has asked the government to assist the expedition which is now endeavoring to improve the condition of Freetown, West Africa. The Governor of Sierra Leone has reported on the suggestion to increase the number of workmen who are working in Freetown under the superintendency of Dr. Logan Turner, that while anxious to give him every assistance he has decided after consultation with the principal medical officer that the best form in which that assistance can be given is for the government to undertake by degrees the surface drainage of those parts of the city most infested by mosquitoes. Arrangements have been made for the immediate surface drainage of a swampy portion of the grass fields district in which Dr. Taylor has worked. The cost of the work is estimated at $2300.

Glanders in London.

A marked increase of the number of cases of glanders in London has recently taken place. During the past few weeks the number of cases reported have run over 40, last week alone totaling 45, as compared with 20 in the corresponding week of last year. There has always been considerable fluctuation in the returns as to glanders in London. For instance, the number which had fallen as low as 786 in 1885, increased to 2226 in 1892, and again fell to 845 in 1898. Last year the number was 1843. The use of mallein in detecting latent cases of the disease may be responsible for some of the recent increases. An unscrupulous owner of horses, when an outbreak occurs in his stud, has all the horses which have been in contact with the diseased animals quietly injected with mallein, and if they show signs of glanders at once proceeds to sell them. If this is done to any large extent it would not be difficult to account for the present spread of the disease.

Gifts of a Patient to a Physician Invalidated.

An important case has just been decided in the law courts. The executors of a wealthy old lady, who died at 80, sought to recover from Dr. Price, who had attended her for 11 years, three sums of $2500, $500 and $1000 given to him in the years 1899-1900. She left at her death property amounting to $450,000, which she had inherited from her first husband. She provided for her second husband, made gifts to relatives in humble circumstances, left her house and grounds for a museum and public gardens, and made large bequests to charities. The executors made no charge of fraud or improper conduct against the doctor, but claimed that because of the relations of physician and patient existing between the parties, in the absence of independent advice obtained by the donor, a presumption of undue influence existed and that such gifts should not stand. The doctor who had been paid for his services in the ordinary way the sum of $1560, explained fully the circumstances in which the gifts were made. The largest sum, $2500, was a gift partly in recognition of his exceptional services as medical attendant, and partly in recognition of his consent to act as trustee of the institution to be founded by the patient in memory of her husband. The $500 was a Christmas present, and the $1000 was given to replace a brougham which had been injured in a carriage accident. The judge ordered the doctor to repay the whole of the gifts, $4000. He ruled that: "It has been laid down that the relation of patient and physician is a confidential relationship, and where it exists, as it did in this case, the donor must have had competent and independent advice before a gift can be supported." The law applies to other confidential relationships, such as those of clergy and solicitors. In the present case the doctor was mulcted in costs, which the *Lancet* thinks was rather hard. As the contention arose out of acts of the testatrix, her estate should have borne the costs. The *Lancet* does not see why a patient's gratitude should not be manifested to her doctor otherwise than by fees which can be claimed, but care should always be taken that the patient has independent advice. If the doctor in the present case had done this, the validity of the gifts could not have been questioned.

Book Notices.

THE STANDARD MEDICAL DIRECTORY OF NORTH AMERICA, Consisting of Twelve Parts, Including Directory of Physicians of North America, Medical Colleges, Medical Service of the United States, Medical Societies, Medical Practice Acts, Medical Publications (Including Books and Periodicals), Mineral Springs, Drugs and Medicines, Medical and Surgical Products, Manufacturers and Life Insurance Companies. Handsomely Bound in Red Buckram. 824 Pages, Imperial Octavo. Price, $10.00. Chicago: G. P. Engelhard & Co.

This directory is divided into twelve parts, the first of which takes up medical colleges, present and extinct, prefaced by a short chronological sketch of medical education. Part second, which makes up the greater part of the book, is on the same general principle as Polk's Directory. An improvement over the latter is that the index of names of colleges is on the front inside-cover page instead of being in the body of the work; furthermore, the colleges in each state are numbered consecutively. An exceedingly important omission is that of the name-index which forms so valuable a guide in looking up the addresses of physicians whose names only are known. The directory of physicians is, so far as we can judge, in the main, correct and complete. The succeeding sections of the book are devoted to the medical service of the United States—the army, navy, marine-hospital service, pension examination service, etc.; medical societies—national, state, district, county, and city; medical legislation, including the text of the medical practice acts of all of the states, a synopsis of the statutes, the board regulations and rules, and the personnel of the state boards of health, and boards of medical examiners; medical publications by authors' names; medical books by subjects, medical directories and medical libraries; hospitals and sanatoria, arranged by states; mineral springs and their distribution; drugs and medicines; medical and surgical products; manufacturers and life insurance companies and fraternal and assess-

ment organizations. It is, of course, too much to expect that a work of this nature could be issued without interleaved advertisements, but this is much to be desired. An interesting page is that which presents the population of the countries of North America, the number of physicians and the proportion of physicians to ten thousand of population.

A PRACTICAL MANUAL OF INSANITY. For the Student and General Practitioner. By Daniel R. Brower, A.M., M.D., LL.D., Professor of Nervous and Mental Diseases in Rush Medical College, in Affiliation with the University of Chicago, and in the Post-Graduate Medical School, Chicago; and Henry M. Bannister, A.M., M.D., formerly Senior Assistant Physician, Illinois Eastern Hospital for the Insane. Cloth. Price, $3.00 net. Handsome octavo of 426 pages, with a large number of full-page inserts. Philadelphia and London: W. B. Saunders & Co. 1902.

The average physician is only incidentally interested in the controversial questions relating to psychiatry; what he needs and asks for is practical information for every-day practice, something to help him solve the problems of managing these unhappy cases. The book before us is an attempt to supply this need and to give this help. It is not intended for the alienist or for those who want an exhaustive treatise on insanity. It is a practical presentation of the subject for practical use. While it is not encumbered with controversial matters or padded with a lot of theories it is sufficiently full and complete to meet every need. Dogmatic assertions are avoided and, when disputed points are considered, the views of others are given as well as those of the authors. The classification of insanity is a stumbling block to most authors of works on the subject. It is impossible to classify the various forms of insanity in a manner satisfactory to all and yet, as the authors say, it is a necessity for the ordering of ideas. They devote quite a chapter to the subject giving the classifications of Ziehen, Kraepelin, Regis, Agostini and others and adopt a modification of that of Kraepelin. A few minor typographic errors are to be found, but not more than is usual in a new edition. The most serious one is in the comparative table of classifications on page 149, where the word "verwirrheit" is used where it should be "verrueecktheit." However, this will not mislead those who read the text.

The subject is presented in an attractive and simple style, making the reading a pleasure, which is more than can be said of most works on insanity. We predict that it will prove one of the most popular works on the subject that has been placed before the profession for years.

A CIVILIAN WAR HOSPITAL. Being an Account of the Work of the Portland Hospital, and of Experience of Wounds and Sickness in South Africa, 1900. With a Description of the Equipment, Cost and Management of a Civilian Base Hospital in Time of War. By the Professional Staff, Anthony A. Bowlby, C.M.G., F.R.C.S., Senior Surgeon; Howard H. Tooth, M.D., C.M.G., F.R.C.P.; Cuthbert Wallace, M.B., B.S., F.R.C.S.; John E. Calverley, M.B., B.S., M.R.C.S.; and Surgeon-Major Kilkelly, C.M.G., Grenadier Guards, Principal Medical Officer and in Military Charge. With Numerous Illustrations. Cloth. Pp. 341. Price, $4.00. New York: Longmans, Green & Co. 1901.

This work contains in detail the work of the Portland Hospital, which was the first of the civilian hospitals to be equipped and sent to South Africa after the opening of the Boer war. It was probably the first voluntary hospital attached to the British army at the front. After describing the personnel, equipment and interior economy of the hospital, the authors describe the work done by this hospital and its career in the field. The medical work done by the hospital was chiefly in enteric and typhoid fevers; the next most frequent diseases being diarrhea, dysentery and diseases due to exposure. The surgical work of the hospital is described by Mr. Bowlby and Mr. Cuthbert Wallace and deals first with weapons and projectiles, the surgical aspects of modern rifle fire, bullet wounds in general with their characteristics, and then takes up special wounds of the bones, joints and blood vessels and then regional injuries. The volume is copiously illustrated and is completed by a series of appendices, containing specific details, forms and blanks, staff of the hospital, etc.

HYGIENE FOR STUDENTS. By Edward F. Willoughby, M.D., Lond., Diploma in State Medicine of the London University. Cloth. Pp. 563. Price, $1.25. London and New York: The Macmillan Co. 1901.

This is practically the fourth edition of the Principles of Hygiene, published in 1884, 1888 and 1893. This is specially adapted to English professional examinations and the arrangement is made accordingly, each chapter ending with a series of questions on the subjects discussed. The book is one that we should consider well adapted for students' use, and, while arranged especially for English students, it might be used with profit in this country. It covers the whole ground of hygiene, not only the more exclusive medical side, but also the subjects of vital statistics, demography, meteorology, etc. We find here and there a little that may be open to question and some matters may arise in this country that are not fully treated of, which is to some extent a defect in the work for American students. Taking it altogether, it is a valuable book and one well worthy the attention of the practicing physician as well as the student.

OFFICIAL LIST OF LEGALLY QUALIFIED PHYSICIANS, STATE OF ILLINOIS. Published by the State Board of Health. March, 1902. Paper Edition and Cloth Edition. Springfield: Illinois State Register Co.

This is a list of the 20,000 physicians who have received certificates from the State Board of Health from July 12, 1877, to March 1, 1902, except those known to be deceased or whose certificates have been revoked. There are given the school of practice, date of license and present address if in Illinois.

A valuable feature of the book is the text of the laws governing practice in Illinois and a summary and tabulation of the laws in all the other states and territories. This is also published separately in a pamphlet which will be appreciated by the applicant for license. A list of accredited medical colleges and information for Illinois applicants for license complete the contents.

SYPHILIS: A Symposium. Cloth. Pp. 122. Price, $1.00. New York: E. B. Treat & Co. 1902.

The papers contained in this volume appeared recently in the *Interstate Medical Magazine* and constituted one of the special numbers which have been sent out of late by that publication. As an up-to-date statement of the practical facts regarding syphilis it makes an exceedingly useful and authoritative little work. Some of the papers have been already noticed in THE JOURNAL abstracts and we need not review them more fully here.

COMPEND OF GENERAL PATHOLOGY. By Alfred Edward Thayer, M.D., Assistant Instructor in Gross Pathology, Cornell Medical College. Containing 78 Illustrations, Several of Which Are in Colors. Cloth. Pp. 321. Price, $0.80. Philadelphia: P. Blakiston's Son & Co. 1902.

This is one of the well-known series of quiz compends published by Blakiston. The illustrations are specially good. Of course, such a work as this is very inadequate for thorough work, but as a reminder to the memory it has its value.

State Boards of Registration.

In Georgia, licenses were given to 74 out of 78 applicants at Atlanta, April 5.

Utah Board Adds to the List.—The session of the Utah examiners on April 7 and 8 added to the licensed physicians of that state 7 out of 10 applicants and 11 of the 12 prospective midwives were licensed.

Indiana Board Gives Certificates.—Eight recent graduates were licensed to practice by the Indiana Board of Medical Registration and Examination at its April meeting at the capitol. A candidate who presented a diploma from a school of magnetic healing at Nevada, Mo., for which he had studied and labored for three weeks, was asked a few questions for the board's amusement. He was advised to try some other calling or else to study a few years.

The Colorado State Board of Medical Examiners passed on the credentials of 43 applicants to practice medicine. Thirty-eight were granted licenses on their diplomas according to the statute requiring the board to recognize as sufficient evidence of ability diplomas from recognized medical colleges. Four passed examinations and were licensed, three of them non-graduates and one a graduate of a medical college requiring only a three years' course. There were 80 written questions in 3 subjects and 70 per cent. was necessary to pass. The application of G. L. Hagen-Burger, No. 3611, was refused, it having been shown by conclusive evidence to the board that the purported diploma from Kiel that he presented was fraudulent.

The dean of that university and the U. S. Consular agent at Kiel report it to be a forgery of the diploma of one Dr. Otto Tretow of that date on the same thesis "Zwei Falle von Luxatio Lentis Congenita." The secretary, Dr. S. D. Van Meter, is prosecuting the man, and will be glad to have the assistance of any graduate of Kiel who can aid him. The man has been arrested, but technicalities may prevent conviction.

North Dakota Examiners at Grand Forks, April 1 to 3, tested 12 applicants and found 11 could answer 75 per cent. of the questions in the 13 subjects. The examination was written.

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per-cent.
J.	R.	Central Coll. of P. and S.	1898	77
G.	R.	Louisville Medical College	1894	81
S.	R.	University of Iowa	1901	79
W.	R.	University of Illinois	1896	76
L.	R.	University of Illinois	1899	80
S.	R.	Coll. of P. and S., Iowa	1901	81
V.	R.	Grand Rapids Medical College	1901	82
C.	R.	Coll. of P. and S., Minnesota	1895	82
M.	R.	Coll. of P. and S., Minnesota	1901	76
P.	R.	Rush Medical College	1901	80
G.	R.	Hamline University	1901	83

FAILED.

332	R.	Minnesota and Rush Med. Coll.	1902	..

Minnesota Examiners gave 97 questions on 12 subjects and required 75 per cent. correct. The written examination was taken by 20 applicants, of whom 17 passed and 3 failed.

PASSED.

Candidate.	Sch. of Pract.	College.	Year Grad.	Per-cent.
1951	R.	Iowa State University	1902	85
1952	R.	Johns Hopkins University	1901	82.3
1953	R.	Laval University	1898	76
1954	R.	Rush Medical College	1897	78.3
1955	R.	Rush Medical College	1900	90.3
1959	R.	Rush Medical College	1902	80
1961	R.	Rush Medical College	1901	83.2
1963	R.	Rush Medical College	1901	84.6
1962	R.	P. and S. Keokuk, 1898, and Rush Medical College	1902	93.8
1968	E.	Rush Medical College	1901	84.4
1956	R.	University of Michigan	1901	85
1957	R.	Hamline University	1901	75
1958	R.	Central Coll. P. and S., Indiana	1900	80
1960	R.	Kiel University, Germany	1891	83.1
1969	E.	Kentucky School of Medicine	1901	82.2
1970	R.	University of Christiania	1897	87.1
1966	H.	Hahnemann Medical College	1895	77.9

FAILED.

1964	R.	Hamline University	1896	68.4
1965	R.	Sioux City College of Medicine	1894	67.5
1967	R.	University of Michigan	1877	66.9

Married.

E. A. DYE, M.D., to Miss Nina Smith, both of Vienna, Ohio, April 10.

A. J. KIMMONS, M.D., to Miss Mary Guy Cowan, both of Shelbyville, Tenn.

HENRY G. HART, M.D., to Miss Selma N. Alpiner, both of Chicago, April 15.

ALEXANDER C. SMITH, M.D., Sterling, Ill., to Mrs. Georgia Hilger, at Chicago.

CHARLES CLARK FOWLER, M.D., to Miss Charlotte Frye, both of Des Moines, Iowa, April 9.

CHARLES F. BAUMEISTER, M.D., Panama, Iowa, to Miss Lida Bard Moore, of Chicago, April 9.

ARNOLD T. ADDY, M.D., Middleport, N. Y., to Miss Mary Waldrum, of Toronto, Ontario, April 14.

HARRY P. RITCHIE, M.D., St. Paul, Minn., to Miss Elizabeth Winter, of Chicago, at St. Paul, April 24.

ARTHUR P. SHELLMAN, M.D., Binghamton, N. Y., to Miss Jennie E. Gibson, of South Pulteney, N. Y., April 15.

HENRY CYRIL GOODMAN, M.R.C.S., L.R.C.P., Kasr-el-Aini Hospital, Cairo, Egypt, to Miss Sue Clay of Paris, Ky., April 22.

SAILING SIMON, M.D., secretary of the staff of the National Jewish Hospital for Consumptive, Denver, to Miss Sara E. Lowenstein of Memphis, Tenn., April 9.

Deaths and Obituaries.

Franklin A. Meacham, M.D. University of Virginia, Charlottesville, 1889, whose death was noted under "General News" last week, was the son of Major Meacham, who was for many years post surgeon at Fort Douglas, Utah. After completing his medical studies he practiced in Salt Lake City and was a member of the Staff of Holy Cross Hospital. At the outbreak of the Spanish-American war he was appointed surgeon of volunteers, with the rank of major, and served with his regiment in Cuba. He made especial study of camp hygiene and was an authority on that subject. He was ordered to Manila and served in the Chinese expedition in 1900. On his return to Manila he was detailed as assistant to Major L. M. Maus, insular health commissioner. Heart failure, caused by overwork on the cholera cases, was the cause of his death, at the age of 39.

Luther B. Grandy, M.D. College of Physicians and Surgeons, New York, 1890, is reported as having died at Lipa, Batangas, Luzon. He was a native of Tennessee and practiced at Atlanta, Ga., until the Spanish-American war, through which he served as major-surgeon of the Third Georgia Infantry, U. S. V. He then went to Manila as an acting assistant surgeon, and was later assigned to the Thirty-fifth Infantry, U. S. V., as major-surgeon, and died while on duty with his command, aged 42.

Richard R. Ricker, M.D. Medical School of Maine, Bowdoin College, Brunswick, 1847, one of the oldest physicians of Lewiston, who served through the Civil war as assistant surgeon of the Twenty-third and Thirty-first Maine Volunteer Infantry, and afterward located in Lewiston, where he was for several terms a member of the city council, and for six years, city physician, died at his home in that city, from paralysis, April 14, after an illness of three days.

George M. Ramsey, M.D. Jefferson Medical College, Philadelphia, who practiced in New York City until the outbreak of the Civil war, through which he served as surgeon of the 95th New York Volunteer Infantry, and soon after retired from practice on account of deafness, contracted while in the service, died at his home in Washington, Pa., from infirmities incident to old age, April 13, aged 82.

Horace Tupper, M.D. University of Buffalo, N. Y., 1862, a pioneer physician of Bay County, Mich., who served two years in the Civil war, until compelled to resign on account of ill-health, and who afterward resided in Bay City, died at his home in that city, April 16, from cancer, after an illness of four months, aged 71.

John F. Dowd, M.D. Dartmouth Medical College, Hanover, N. H., 1896, of Manchester, N. H., a member of the Manchester Medical Association and of the New Hampshire State Medical Society, died at Sacred Heart Hospital, Manchester, April 12, from pneumonia, after an illness of one week, aged 37.

Eugene C. Hoge, M.D. Long Island College Hospital, 1872, one of the best-known physicians of Wheeling, W. Va., a member of the Medical Society of the State of West Virginia, died in Wheeling from meningitis, after an illness of several weeks, April 10, aged 54.

T. H. Sharpneck, M.D. Jefferson Medical College, Philadelphia, 1872, of Jefferson, Greene County, Pa., a member of the American Medical Association, died suddenly from paralysis while making a professional call at Khedive, April 12, aged 58.

Braxton D. Cox, Jr., M.D. Kentucky School of Medicine, Louisville, 1892, a prominent young physician of Jackson, Ky., was shot and instantly killed while on his way home from his office, April 13. So far, his assassin has not been found.

Theodore W. Nellis, M.D. Albany (N. Y.) Medical College, 1881, died at his home in Albany, April 14, after a long illness. The Medical Society of the County of Albany held a special meeting, April 15, and passed suitable resolutions.

Joseph T. V. Blocksom, M.D. Jefferson Medical College, 1871, of Wilmington, Del., who had been an inmate of the State Hospital for the Insane, Farnhurst, for several weeks, committed suicide at the hospital, April 15, aged 55.

Matthew Campbell, M.D. Medical School of the Valley of Virginia, Winchester, Va., 1852, a retired physician, for many years a practitioner of Fairmont, W. Va., died at his home in Parkersburg, W. Va., April 12, aged 84.

John H. McIntyre, M.D. Jefferson Medical College, Philadelphia, 1864, one of the oldest and best-known physicians of St. Louis, Mo., died from asthma at his residence in that city, after a long illness, April 10, aged 69.

Charles H. Carter, M.D. Rush Medical College, Chicago, 1880, a native of Rock Island, Ill., who practiced for several years and then was obliged to go to California for his health, died at Pasadena, April 5, aged 49.

William L. Bain, M.D. Trinity Medical College, Toronto, 1888, who served during the Riel rebellion in the northwest, and

practiced medicine in Toronto until 1893, when he moved to Chicago, died at his home, April 13.

Charles E. Bartlett, M.D. Berkshire Medical College, Pittsfield, Mass., 1844, a resident of Battle Creek, Mich., since 1845, died at his home in that city from pneumonia, April 14, after a short illness, aged 82.

Marcellus M. White, M.D. Hospital College of Medicine, Louisville, Ky., 1895, of Cumberland Gap, Tenn., died in Fannin County, Texas, April 13, after a long illness, aged 39.

Moses H. Detwiler, M.D. Jefferson Medical College, Philadelphia, 1870, one of the oldest physicians of Bedford County, Pa., died, April 15, at his home in Hopewell.

Alvin A. Moore, M.D. University of Cincinnati, 1886, of Parker's Landing, Pa., died from tuberculosis at Kenton, Ohio, after a long illness, April 14, aged 41.

Andrew G. Toven, M.D. College of Physicians and Surgeons, New York, 1890, of New Britain, Conn., was found dead in Hartford, Conn., April 11, aged 35.

William F. Shepard, M.D. Medical School of Maine, Bowdoin College, Brunswick, 1871, died at his home in Bangor, from pneumonia, April 12, aged 57.

Edward P. Gordon, M.D. Toronto University Medical College, 1890, died recently in San Francisco, Cal. He practiced for several years in Toronto.

David A. Plank, M.D. Jefferson Medical College, 1870, of St. Clairsville, Pa., a veteran of the Civil war, died, April 12, at his home, aged 64.

Joseph H. Gallagher, M.D. Long Island College Hospital, Brooklyn, 1898, died at his home in Brooklyn, from pneumonia, April 9, aged 26.

Charles B. Robertson, M.D. University of Buffalo, N. Y., 1884, died from consumption at his home in Towlesville, N. Y., April 4, aged 49.

John Dixon, M.D. Jefferson Medical College, Philadelphia, 1860, of Fayetteville, Ala., died at Talladega, April 15, after a long illness.

Jonathan Faust, M.D. Jefferson Medical College, Philadelphia, 1867, died at his home in Zieglersville, Pa., April 14, aged 60.

Robert W. Dailey, M.D. University of Pennsylvania, Philadelphia, 1842, died at his home in Romney, W. Va., April 12, aged 80.

George A. M. Cooke, M.D. Tulane University, New Orleans, 1881, died at his home near Washington, La., April 10, aged 47.

Jessie Florence McKay, M.D. University of Buffalo, died recently in New York City, from pleuro-pneumonia, aged 41.

P. A. Davis, M.D. Willamette University, Salem, Ore., 1871, died, the second week in April, at his home in Silverton, Ore.

James T. McKillop, M.D. Trinity University, Toronto, Ont., 1889, died at his home in Wardsville, Ont., April 9, aged 41.

George S. Smith, M.D., of Pinckneyville, Ill., died at his home, April 2, aged 85.

John F. Biggs, M.D., died at his home in Center Point, Ark., recently.

New Instruments.

THE PUNCTUMETER, FOR MEASURING THE RANGE OF ACCOMMODATION.

J. G. HUIZINGA, M.D.
GRAND RAPIDS, MICH.

The punctumeter is an instrument for ascertaining the range of accommodation. Its name signifies a point-measurer, i. e., to measure the far and near points of vision. The difference between these two points equals the range of accommodation. For several years I have been impressed with a lack of reliable methods for making these measurements. No instrument for obtaining this information being in existence, I began to study whether it would not be possible to have one constructed on scientific principles. After the usual history of trials and failures I am at last able to present to the profession an instrument which I believe to be absolutely reliable. It is so constructed that it can also be used as a rapid test for any of the errors of refraction and in this respect I know of no instrument that is superior to it.

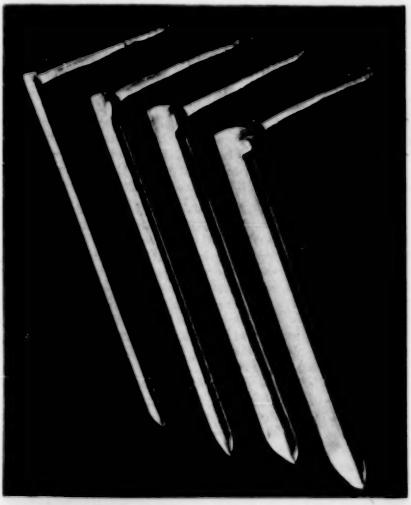
A 10 D. convex lens is placed at a distance of 9.7 cm. from the end of the instrument which rests against the edge of the orbit. This brings the lens practically 10 cm. from the nodal point of the eye. A test card, with figures of appropriate design and size, is placed 10 cm. behind this lens and thus occupies one of the points of the conjugate foci, the other

being the nodal point of the eye. This test card can be moved back and forward. The difference in centimeters between the greatest and least distances at which this test type can be distinctly seen is the measure of the range of accommodation.

INSTRUMENT TO FACILITATE THE PLACING OF DRAINAGE IN AFTER-TREATMENT OF SUPPURATIVE APPENDICITIS.

A. E. SPALDING, M.D.
LUVERNE, MINN.

The effort to place drainage at the bottom of the sinus after removal of the primary drain is sometimes difficult and often painful to the patient. As the gauze adheres to the sides



of the sinus, considerable force has to be used before it can be properly carried to the bottom of the cavity.

The necessity for an instrument for the purpose of facilitating the placing of drainage led to a crude production which I hammered out of a white metal spoon and which I have frequently used during the past four years.

Having demonstrated to my own satisfaction the practicability of such an instrument, I have recently had made for me

a set of four instruments, ¾, ⅝, ½ and ⅜ of an inch in diameter by 5 inches in length. The large size is the one ordinarily used for the first dressing, diminishing the size as the sinus narrows.

The manner of using is to place the convexity toward the median line; gently force the instrument to the bottom of the cavity; then draw it toward the median line as you would a retractor, and with long dressing forceps grasp a strip of the gauze which is then carried to the bottom of the cavity and released. After packing loosely, pressure is used with the dressing forceps on the top of the gauze to prevent misplacement while withdrawing the instrument. Should Morris' wick drain be used instead of gauze, the principle and utility of the instrument will be the same.

While this is a very simple device, I am confident it will be found a great aid to the proper carrying out of the treatment required in such cases.

Their use need not be restricted to the purpose above indicated, but will be found convenient in certain gall-bladder cases or in any abdominal case requiring subsequent drainage, as well as in suprapubic cystotomy as an exploratory instrument.

Miscellany.

American Journalism.—America can now boast of seven great weeklies, 260 monthlies, and some 25 other journals of various kinds. According to the *American Medical Journalist*, the following new journals were born within the year: *American Medicine*, Philadelphia; *Detroit Medical Journal*; *Texas Medical Gazette*, Fort Worth, Tex.; *Journal of New York Medical Association*, Albany; *Journal of Surgical Technology*, New York City; *Doctors' Magazine*, Alma, Mich.; *Regular Medical Visitor*, St. Louis.

What One Society Does.—In Minnesota a local medical society has by practical experiment carried to successful conclusion shown what can be accomplished by our profession in a business way. The Ramsey County Medical Society owns and publishes the *St. Paul Medical Journal*, whose excellence is everywhere well recognized. The journal has been earning a profit for the society, and has collected a library of 3500 or 4000 volumes which is open to the profession. There is operated in connection with it a clinical laboratory, and a profit has been made out of the preparation and sale of catgut. In view of the marked success of this experiment there is no inherent reason for holding that the profession can not in other cities conduct in a coöperative way those industries with which it is so closely allied.—*Cleveland Med. Journal.*

A Lay View of Physicians.—"Doctors do not call themselves philanthropists, yet they practically accomplish more in that line than men of any other vocation. What a great, though quiet, force they have been in the building of the West! If the full story of their labors and sacrifices in Missouri could be told the record would touch every heart and impress every mind with its value and magnitude. Doctors are men of sentiment, wholesome and high-minded sentiment, suited to the needs and advancement of everyday life. They know few holidays and often devote those they have to greeting a noble old teacher, as they did last night. (This refers to the Gregory banquet.) They work in the shadows of human existence, but always toward the light. Americans could get along without politicians, being born that way, but the learning and goodness of the medical profession do not come by nature."—Editorial, St. Louis *Globe-Democrat.*

Hahnemann on Sectarianism.—We have all heard and read of people who are more royalistic than the king himself; and so sectarians of all descriptions frequently become more zealous than the founders themselves. Some of the narrow-minded homeopaths object to the liberalizing movement which has been making itself felt of late and which induces many Hahnemannians to drop their sectarian names. Such ones will do well to read and ponder over the words of Hahnemann, which will be found in his "Lesser Writings." They are in substance as follows: "The motto of a sectarian name is a bar to sober, calm, scientific investigation; it only rouses the antagonistic spirit to a fierce, volcanic flame. Truth and welfare of humanity should be the only motto of the true followers of the art, and a brotherly, peaceful reunion, without slavish adherence to any sectarian leader, should be our only watchword, if we do not wish to see that little good that we have accomplished completely sacrificed to party spirit and discord."—*Merck's Archives*, March.

Movement of the Population in France.—An editorial in the *Presse Medicale* states that the recent census shows that France has gained 444,613 inhabitants during the last five years, more than two and a half times the gain during the preceding years. During the corresponding period Germany has gained 140 for every 1000 inhabitants; Austria 96, and Great Britain 100; while the gain of France has been only 16 for every 1000. The French cities have increased their population by 458,576 during this period, so that in spite of the total gain, the country outside of the cities has actually lost inhabitants. The departments which contain the largest cities, Seine and Rhône, average 256 deaths from tuberculosis out of every 1000 deaths, while the rural districts average only 68. Out of this proportion of 256 a very large number, if not the majority, are young men, *déracinés*, transplanted from their natal soil, from the vast spaces and pure air of the country, who have not been able to acclimate themselves to the conditions of crowded city life.

Superiority of Goats' Milk.—The French National Société d'Acclimatation and the Paris municipal laboratory have been making extensive tests of goats' milk. The results have demonstrated—according to an article in the *Journal de Méd.*—that the goat deserves the highest rank among all milk-producing animals. Their milk contains 22 to 40 gm. of casein to the liter and it is identical in all its properties with the casein in human milk. The species of goat and the period of the lactation determine the richness of the milk. The molecules of butter and casein are extremely minute and the milk is rich in natural phosphates. As the goat is refractory to tuberculosis, the danger of infection from this source is avoided by the use of goat milk. A Paris physician, Dr. G. Barbellion, has opened a goat milk depot and calls upon his confrères elsewhere to follow his example and thus remedy one of the worst scourges of our epoch. The medical control of the establishment guarantees the aseptic bottling of the milk as soon as drawn. Results have shown the way in which young and old thrive on this pure, physiologic, living natural food.

Liquid Soap.—An excellent formula for liquid soap for surgical and toilet purposes is the following, from the *Am. Jour. Pharmacy:*

℞.	Cottonseed oil	300
	Alcohol	300
	Water	325
	Sodium hydrate	45
	Potassium carbonate	10
	Ether	15
	Carbolic acid	25

To the oil in a bottle of sufficient size, add 100 c.c. of water and 200 c.c. of alcohol; add the sodium hydrate and shake occasionally until it saponifies; then add the remainder of the alcohol and the potassium carbonate dissolved in the rest of the water; lastly add the carbolic acid and ether. Keep well corked. It will solidify at a temperature below 10 C. A few drops will make a copious and lasting lather with great detergent qualities, excellent for instruments, preparation of patients, cleansing of the hands, especially when stained or odorous, and for other surgical uses. By substituting an essential oil for the ether and carbolic acid, a scented toilet soap is made. This makes an unequaled shaving soap and shampoo, according to Pharmacist M. I. Wilbert, of the German Hospital, Philadelphia.

Javanese Method of Narcosis.—L. Steiner describes in the *Arch. f. Schiffs- u. Tropen-Hygiene*, v, 12, a method of narcosis which has been long practiced in Java. The hands are placed on the neck of the subject, the fingers meeting at the back, and the carotid artery is briefly compressed with the thumbs, back of and a trifle below the lower jaw. The artery is pressed back toward the spine. Only 5 out of 30 subjects failed to

respond to his application of this maneuver. The head falls back and the subject seems to be in a profound slumber, from which he awakes in a few minutes as if suddenly aroused. The effect can not be due to suggestion, as the same maneuver avoiding the arteries, fails to produce any effect. The procedure is called by a Javanese term which signifies "compression of the sleep vessel." The popular name for the carotid artery in Russian, by the way, is also the "sleep artery"; and "carotid" is derived from the Greek *karos*, sleep. He has never witnessed or heard of any accidents from this method of narcosis which is widely practiced on the island, frequently associated with general massage. The patients do not vomit, and there is no incontinence of urine or feces. He opened an inguinal abscess in one case while the patient was unconscious. He is inclined to advocate this absolutely harmless method of narcosis as worthy of a place in surgery, on account of the rapidity with which it can be accomplished and the rapid awakening. The procedure may also prove effective in combating cephalalgia, vertigo and insomnia.

The Relation of Malignant to Rheumatic Endocarditis.—At the Royal Medical and Chirurgical Society Dr. F. J. Poynton and Dr. Alexander Paine read an important paper on this subject. The relationship between the two diseases was, they believed, a very close one, and this was especially true of certain cases of malignant endocarditis which were associated with a previous history of rheumatic fever, and during the course of which rheumatic manifestations were apt to occur. Now that rheumatic valvulitis is known to be infective, "malignant endocarditis" is, they think, a more accurate term than "infective endocarditis." The question arises whether some of these malignant cases are not really rheumatic. The possibility of complete proof has been heretofore impossible since an exciting cause of rheumatic fever was unknown. The evidence in favor of such a cause being a diplococcus is now extremely strong. The writers' research has led to the conclusion that there is a group of cases of malignant endocarditis rheumatic in origin. A diplococcus can be isolated from cases of malignant endocarditis which grows in pure culture and reproduces that disease in rabbits, and resembles the diplococcus of rheumatic fever in its morphology and cultural characteristics. Moreover, the diplococcus of rheumatic fever produces malignant endocarditis in rabbits on the one hand, and the diplococcus from certain cases of malignant endocarditis produces rheumatic fever in rabbits on the other. Finally every grade of valvulitis, from simple or malignant and vice versa, can be produced by these two diplococci. A valuable series of macroscopical and microscopical specimens, lantern slides, and drawings were exhibited in support of these statements.

Primary Tuberculosis of the Cervix Simulating Cancer.—At the Obstetrical Society, London, Dr. Lewers related the case of this very rare condition. A married woman, aged 36, had never been pregnant. For nine months there had been a blood-stained and slightly offensive vaginal discharge. Bleeding was noticed after coitus and after using a vaginal syringe. The general health began to fail about twelve months before she came under observation, but she did not think she had lost flesh. An aunt had died of consumption. The vaginal portion of the cervix seemed to be in a condition identical with what was found in many cases of cancer. It was the seat of a friable growth which bled easily on examination. The uterus was freely movable. Thinking the case was one of cancer of the cervix, Dr. Lewers performed vaginal hysterectomy on Jan. 30, 1896. The patient made a good recovery. In November, 1901, she enjoyed "fairly good health." Microscopic examination of the growth showed that it was tuberculous.

Medicine Among the Ancient Inhabitants of Peru.—The *Cronica Medica* of Lima published during the last months of 1901 the graduating thesis of D. E. Lavorería which is devoted to this subject. He pays particular attention to the herbs used by the ancient Incas in various affections, some of them still in use to-day. He mentions that anesthesia was induced by an exceptionally strong alcoholic drink when servants were to be killed at the death of their masters and also when the ears of young warriors were mutilated. Ancient Spanish writers dwell upon the fondness of the Incas for bathing, which they believed washed away their sins as well as various diseases. Another cause for their love of hydrotherapy is suggested by a royal decree calling for a certain tax tribute from all the people. When the subjects were absolutely too poor to pay it in money they must pay it with a certain number of body lice in token of vassalage. The Inca names of certain diseases indicate their nature, as for instance "burning breathing." Medicine was practiced mostly by the priests and the trephining of the skull was a measure adopted to allow the egress of the evil spirit causing the disease. Muniz found trephined skulls in the proportion of 2 per cent. in his collection of 1000 skulls. Some of the subjects evidently survived and others died under the operators' hands, to judge from the unfinished condition of the wound.

Cure of Excessive Sweating of the Feet.—Gorodtzeff writes to the *Voenno-Med. Journal* that he has found ordinary kitchen soap the most reliable and best treatment of excessive sweating of the feet and the resulting ulcers. The feet are bathed in tepid water and the skin—between the toes and wherever there is sweating—is rubbed with a piece of moistened soap until a thin layer remains on the skin. The stockings and shoes are then put on without wiping the feet. The procedure is repeated once a week or more or less frequently, and in his extensive civilian and army experience the most inveterate and fetid sweats were thus conquered in every instance. Wearing ventilated shoes during the summer hastens the cure.

Treatment of Smallpox with Brewers' Yeast.—The favorable effect of yeast in furunculosis suggested to S. Pietri of Nice that it might be useful also in smallpox. The *Semaine Méd.* of February 19 states that it seemed to have an actual abortive influence in the two cases in which he tried it. Both were confluent cases and recovered rapidly after the administration of five or six teaspoonfuls of fresh yeast every day, with no other treatment. The pustules healed promptly without suppuration, fever or pitting.

Desiccated Serum for the Biologic Blood Test.—J. Hausner has found that it is possible to preserve the sera of various animals to use in the Deutsch and Uhlenhuth biologic test for blood. He poured the sera in a thin layer in Petri dishes and dried them in the oven in the dark. The powder thus obtained proved extremely effective.—*Med. Obsrvenic*, December, 1901.

Societies.

COMING MEETINGS.

American Medical Association, Saratoga Springs, N. Y., June 10 to 13.

Association of American Physicians, Washington, D. C., April 29 to May 1, 1902.
American Association of Genito-Urinary Surgeons, Atlantic City, N. J., April 30, 1902.
International Association of Railway Surgeons, St. Louis, Mo., April 30 and May 1 and 2, 1902.
American Gastro-Enterological Association, Washington, D. C., May 2, 1902.
Nebraska State Medical Society, Omaha, May 6-8, 1902.
Texas State Medical Association, Dallas, May 6-9, 1902.
Kansas Medical Society, Lawrence, May 7-9, 1902.
American Therapeutic Society, New York City, May 13, 1902.
Utah State Medical Society, Salt Lake City, May 13-14, 1902.
Oklahoma Territory Medical Association, Oklahoma City, May 14, 1902.
Arkansas Medical Society, Little Rock, May 13-15, 1902.
New Hampshire Medical Society, Concord, May 15-16, 1902.
Illinois State Medical Society, Quincy, May 20-22, 1902.
American Surgical Association, Albany, N. Y., May 20-22, 1902.
Medical Association of the State of Missouri, St. Joseph, May 20-22, 1902.
Kentucky State Medical Society, Paducah, May 7-9, 1902.
Arizona Medical Association, Tucson, May 21-22, 1902.
Medical Society of West Virginia, Parkersburg, May 21-23, 1902.
Medical Association of Montana, Anaconda, May 21-22, 1902.
Iowa State Medical Society, Des Moines, May 21-23, 1902.
Indiana State Medical Society, Evansville, May 22-23, 1902.
American Pediatric Society, Boston, May 26-28, 1902.
American Laryngological Association, Boston, Mass., May 26-28, 1902.

American Gynecological Society, Atlantic City, May 27, 1902.
Connecticut Medical Society, New Haven, May 28-29, 1902.
Ohio State Medical Society, Toledo, May 28-30, 1902.
American Laryngological, Rhinological and Otological Society, Washington, D. C., June 2-4, 1902.
Louisiana State Medical Society, Shreveport, June 3-5, 1902.
Medical Society of the State of North Carolina, Wilmington, June 3-7, 1902.
Maine Medical Association, Portland, June 4-6, 1902.
Wisconsin State Medical Society, Milwaukee, June 4-6, 1902.
Rhode Island Medical Society, Providence, June 5, 1902.
South Dakota State Medical Society, Scotland, June 4-5, 1902.
Association of Military Surgeons of the United States, Washington, D. C., June 5-7, 1902.
American Orthopedic Association, Philadelphia, Pa., June 5-7, 1902.
American Academy of Medicine, Saratoga Springs, N. Y., June 7, 1902.
American Association of Life Insurance Examining Surgeons, Saratoga Springs, June 9, 1902.
National Confederation State Medical Examining and Licensing Boards, Saratoga Springs, N. Y., June 9, 1902.
Association of American Medical Colleges, Saratoga Springs, N. Y., June 9, 1902.
American Climatological Association, Los Angeles, Cal., June 9-11, 1902.
American Proctological Association, Saratoga Springs, N. Y., June , 1902.
Medical Society of Delaware, Newark, June 10, 1902.
Massachusetts Medical Society, Boston, Mass., June 10-11, 1902.
Colorado State Medical Society, Pueblo, June 17, 1902.
American Medico-Psychological Association, Montreal, June 17-20, 1902.
Minnesota State Medical Society, Minneapolis, June 18, 1902.
Medical Society of New Jersey, Atlantic City, June 24-26, 1902.
Washington State Medical Society, Tacoma, June 24-26, 1902.
Michigan State Medical Society, Port Huron, June 26-27, 1902.

Cass County (N. D.) Medical Society.—At the annual meeting of this Society, Dr. Isaac N. Wear, Fargo, was elected president.

American Therapeutic Society.—This Society will hold its third annual meeting at the New York Academy of Medicine, May 13, 14 and 15, under the presidency of Dr. Reynold Webb Wilcox, New York City.

Southern Idaho District Medical Society.—This Society convened at Boise, April 3. Dr. Burpee L. Steeves, Weiser, was elected president; Dr. Lewis C. Bewers, Boise, vice-president, and Dr. Hubert A. Castle, Pocatello, secretary and treasurer.

Cumberland County (N. J.) Medical Society.—At the annual meeting of this Society, held in Bridgeton, Dr. H. Garrett Miller, Millville, was elected president; Dr. John C. Applegate, Bridgeton, secretary, and Dr. Joseph Tomlinson, Bridgeton, treasurer.

Cuyahoga County (Ohio) Medical Society.—The annual meeting of this Society was held, April 3, when Dr. John P. Sawyer was elected president; Dr. Frederick C. Herrick, vice-president; Dr. George W. Moorehouse, secretary, and Dr. Charles G. Foote, treasurer.

Perry County (Ind.) Medical Society.—This Society, at its annual meeting held in Tell City, elected Dr. Charles M. Brucker, Tell City, president; Dr. Henry G. Weiss, Lamar, vice-president; Dr. Claude T. Hendershot, Cannelton, secretary, and Dr. James B. Bennett, Derby, treasurer.

San Diego County (Cal.) Medical Society.—At the annual meeting of this Society, April 4, at San Diego, Cal., the following officers were elected: President, Dr. William M. Cummings; vice-president, Dr. Peter J. Parker, and secretary and treasurer, Dr. Thomas L. Magee, all of San Diego.

Albany County (N. Y.) Medical Association.—The annual meeting of this Association was held at Watervliet, April 1. Dr. William E. Lothridge, Verdoy, was elected president; Dr. Adam T. Van Vranken, Watervliet, vice-president, and Dr. Martin J. Zeh, Watervliet, secretary and treasurer.

Edwards County (Ill.) Medical Society.—The physicians of Edwards County met at Albion, April 8, and effected a permanent organization with the following officers: Dr. William E. Buxton, Samsville, president; Dr. John S. Williams, Albion, vice-president, and Dr. James H. Lacy, Albion, secretary.

Tipton County (Tenn.) Medical Society.—This Society, originally formed in 1876, was reorganized at Covington, April 1, with the following officers: Dr. James B. Witherington, Munford, president; Dr. William H. Sale, Covington, vice-president, and Dr. B. V. Dickson, Covington, secretary and treasurer.

Essex District (N. J.) Medical Society.—At the annual meeting of this Society, held in Newark, April 1, Dr. James T. Wrightson was elected president; Dr. Walter S. Washington, vice-president; Dr. Archibald Mercer, secretary; Dr. Charles D. Bennett, treasurer, and Dr. William S. Disbrow, reporter, all of Newark.

Windham County (Conn.) Medical Society.—The one hundred and ninth annual meeting of this Society was held at Willimantic, April 10. Dr. Frank H. Coops, Danielson, was elected president; Dr. Henry R. Lowe, Putnam, vice-president; Dr. James L. Gardner, Central Village, clerk, and Dr. Theodore R. Parker, Willimantic, county reporter.

Steuben County (N. Y.) Medical Association.—This Association was organized at Hornellsville, April 7, with the following officers: Dr. John G. Kelly, Hornellsville, president; Drs. Charles O. Green, Hornellsville, George C. McNett, Bath, and Herbert B. Smith, Corning, vice-presidents, and Dr. Charles R. Phillips, Hornellsville, secretary and treasurer.

Washington County (Texas) Medical Association.—This organization, which was originally formed in 1868, was reorganized at Brenham, April 8, with the following officers: Dr. James T. Spann, Chappell Hill, president; Drs. R. H. Lennert, Brenham, and W. R. Campbell, Chappell Hill, vice-presidents, and Dr. John B. York, Brenham, secretary and treasurer.

Florida Medical Association.—The annual meeting of this Association was held in Tampa, April 9, 10 and 11. The following officers were elected: Dr. J. Harris Pierpont, Pensacola, president; Drs. Edward N. Lieli, Jacksonville, and John MacDiarmid, DeLand, vice-presidents, and Dr. J. D. Fernandez, Jacksonville, secretary and treasurer. St. Augustine was selected as the meeting place for 1903.

Broome County (N. Y.) Medical Association.—This Association held its annual meeting in Binghamton, April 8, and elected Dr. Le Roy D. Farnham, president; Dr. William A. White, vice-president; Dr. Clarke W. Greene, secretary, and Dr. William H. Knapp, treasurer, all of Binghamton. Dr. John M. Farrington, Binghamton, was elected delegate to the State Medical Association, and Dr. Clarke W. Greene, alternate.

Tidewater Medical Association.—This Association, composed of colored physicians from Norfolk, Portsmouth, Suffolk, Yorktown, Gloucester, Hampton, Old Point, and Newport News, Va., was organized at Newport News, April 10, with the following officers: Dr. William R. Granger, Newport News, president; Dr. Philip L. Barber, Norfolk, vice-president; Dr. Welcome T. Jones, Newport News, secretary, and Dr. Thomas W. Addison, Hampton, treasurer.

Fairfield County (Conn.) Medical Association.—The one hundred and tenth annual meeting of this Association was held in Bridgeport, April 8. The newly-elected officers include Dr. Nathaniel E. Wordin, Bridgeport, president; Dr. William B. Cogswell, Stratford, vice-president; Dr. Harris F. Brownlee, Danbury, county reporter, and Dr. George S. Ford, Bridgeport, clerk. Delegates and alternates to the State Society were also elected.

West Penn Hospital (Pittsburg) Resident Physicians' Association.—This Association, composed of the resident physicians at the hospital for the past 28 years, held a smoker, April 10. About 40 physicians were present. The organization is a year old and the following officers were re-elected for another year: President, Dr. James W. MacFarlane; vice-presidenth, Drs. Ellis E. Montgomery and Thomas L. Hazzard, Allegheny; secretary, Dr. J. M. Jackson, and treasurer, Dr. Elwood B. Haworth.

Blue Earth County (Minn.) Medical Society.—The reorganization of this Society was effected at Mankato, April 3, along the plans adopted by the American Medical Association. The following were elected officers: President, J. Francis Schefick; vice-presidents, F. D. Brandenburg, John Williams, and Julian A. Heilscher; treasurer, DeLos D. Smith; secretary, Carl J. Holman; judicial council, William Frisbie, Madge Timmerman-Holman and S. D. Sour. A resolution of approval of the plan of reorganization of the Minnesota Medical Society was passed. The subject of discussion for the evening was "Puerperal Fever, Its Prophylaxis and Treatment."

Milwaukee County (Wis.) Medical Society.—This Society held its annual meeting in Milwaukee, April 11. The following officers were elected for the ensuing year: Dr. Horace M. Brown, president; Dr. William H. Washburn, vice-president; Dr. Alfred W. Gray, secretary; Dr. Charles G. Willson, treasurer, and Drs. Alden B. Farnham, Ernest Copeland and Louis F. Frank, censors, all of Milwaukee. This Society was organized in 1846, and with the exception of two periods of inactivity, has been holding meetings regularly. At present it has more than eighty members, with the prospect that this number will be greatly increased.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held March 26, 1902.

President, Thomas H. Fenton, M.D., in the Chair.

Symposium Upon Dysentery.

DR. L. NAPOLEON BOSTON read a paper entitled "Amebic Dysentery with Hepatic Abscess; Rupture into the Lung; Amebæ Coli Found in the Sputum." Dr. Boston's paper recounted the case of a male, aged 21, who served for several months in the U. S. Army in the Philippines. Within the time of his service he several times had attacks of dysentery lasting 3 or 4 days. At one time, upon the day of admission to the army hospital, he had 28 bloody stools. There were hard nodular masses over the abdomen, with pain. The patient returned to the United States in June, 1901, and the symptoms abated. When seen by Dr. Boston in September, 1901, the lungs were normal. On Feb. 4, 1902, the patient was seized with chills, developing the symptoms and signs of a right lobar pneumonia. Respirations were 40, there was much pain. Drenching sweats followed, the temperature usually being 98 degrees. There was paroxysmal cough in the morning. Tenderness developed in the epigastrium. Impairment of resonance of the right lower lung occurred with crackling rales over the base. Girdle pain developed, and cough accompanied with free expectoration of blood-streaked gelatinous sputum. Microscopic examination of the sputum showed the presence of amebæ coli, oil globules, diplococci and blood cells; later there was presence of elastic tissue.

In a series of 2400 cases of amebic dysentery collected, 20 per cent. showed the development of hepatic abscess. The patient was shown in good condition, now manifesting no symptoms; the physical signs being practically *nil*.

DR. J. M. ANDERS directed attention to the afebrile state, a condition usual in such an hepato-pulmonary abscess. The speaker cited the case as an example of the common chronicity of the disease, symptoms being absent for months before its recent manifestation. The lesions were believed meanwhile to have persisted in the intestines.

DR. J. H. GIBBON referred to a man who had been in South Africa and upon whom he had operated for some condition causing enormous distension of the right hypochondrium. The diagnosis of a broken-down hydrated cyst of the liver was made. The liver extended below the umbilicus. The condition proved, upon operation, to be an amebic abscess with sterile pus. A sinus existed for three months subsequent to incision and drainage and then closed, the liver meanwhile contracting. There was no pain or leucocytosis.

Bacillary Dysentery.

DR. SIMON FLEXNER presented this subject and said that the classification of dysentery was formerly based upon its clinical and pathologic manifestations, but that its etiology is the only true basis of classification. According to pathologic findings, there were commonly said to be four forms, namely, catarrhal, diphtheritic, acute ulcerative and chronic ulcerative. As to the catarrhal form, there is nothing specific in its causation; it accompanies scarlet fever, diphtheria, tuberculosis, enteric fever, etc., and it is not at all likely that this form can ever have a specific etiology.

Another classification which has been common is endemic (chiefly in the tropics) and epidemic, acute in its nature. The two are not different, however, in their causation. Within the last several years the use of the microscope and culture tube has done much to put the classification upon an etiologic basis. The bacillary form of dysentery is found to be due to a bacillus not normally in the intestine. It is of the typhoid group, although different from the true typhoid bacillus. When a patient is infected with the bacillus, the blood undergoes such changes as to give the agglutination test with this special bacillus. This is particularly manifest in the form in which the pseudo-membrane is found in the intestine. Some three years ago this subject was studied by Shiga in Japan. Great difficulty was experienced because of the many organisms present in the intestine. The specific organism was differentiated by the agglutinative reaction. It has since been demonstrated by Strong and the speaker from studies in the Philippine Islands and in Germany by Kruse; and Dr. Flexner said he had had the privilege of studying the disease in soldiers returned from Porto Rico. In this country the past summer there were sporadic cases and some epidemics. One of the latter occurred at Lancaster, Pa. One peculiar and striking fact is, that (especially in the diphtheritic form) when the bacilli diminish in number from the intestine, the reaction of agglutination lessens.

There is a group of cases in which the specific bacillus is never found; there is no agglutinative reaction and the disease is chronic. This is the amebic variety. In the acute form no amebæ are present. Ulceration in the two varieties also differs. The two forms are separated by clinical phenomena, pathologic findings, and especially in the micro-organisms causing them. We can not give true dysentery to the lower animals. We may cause lesions, but not characteristic ones.

It has long been noted that advanced Bright's disease and cirrhosis of the liver often end by dysentery. This form agrees exactly with the bacillary variety. The same organism is present. This is evidence of the wide distribution of this special bacillus, and the liability of debilitated subjects.

Amebic Dysentery.

DR. WILLIAM OSLER, Baltimore, addressed the society upon this subject. He stated that it was his fortune to have introduced the term. He briefly related experience with the disease in Johns Hopkins Hospital during the last 12 years. It is endemic in his city and state. Within the period mentioned 93 cases have been admitted to the wards; double this number had been treated at the dispensary. Four or five cases had come from the same locality. There were only 11 females in the group. The disease is more common among whites, there being only 9 colored patients of the number. It is a disease chiefly of young adults and is essentially chronic. Very few cases are acute. Fever is slight. Pus, mucus and blood are found in the stools. Four cases are under treatment at present, one of which has persisted for 6 years. It is common for constipation to alternate with diarrhea. Very few die of dysentery *per se*. Two cases died of perforation. Abscess of the liver is not infrequently a cause of death. Twenty-three cases developed liver abscess. Only the severe forms were admitted to the hospital.

After the studies of Shiga and Flexner it was thought that all forms of dysentery might be due to the bacillus of Shiga, but it is now known that there are marked differences between the bacillary and amebic forms. The amebic variety does not occur in widespread epidemics; it is rarely acute; it kills more by complications; its chronicity is marked, with a tendency to relapses; the amebæ coli or the pus of an abscess are found in the stools; the serum reaction of Shiga's bacillus is absent. This variety will be recognized to have distinct characteristics from the bacillary form. A considerable number of cases die. The mortality is greater than that of typhoid fever; it approximates that of pneumonia. Two cases of hepatico-pulmonary abscess occurred at the hospital this winter. Operation in such cases is questionable. Of the cases in which abscess ruptures into the lung 40 to 50 per cent. get well without operation. Such a focus is often central at the root of the lung, can not be located, and is difficult of access. One of these two cases nearly strangled to death and finally died of exhaustion in his attempt to cough up the pus.

The Treatment of Dysentery.

DR. H. A. HARE claimed that much of the treatment commonly employed is based upon empiricism, and is irrational. The food should be easily digested and such as is chiefly digested in the stomach and duodenum, so that there will be but little residue to pass into the lower bowel. Milk is not always as useful as is supposed, because curds are apt to pass through the bowel undigested. Milk should be well diluted, better peptonized, and given in small quantities frequently. Solid food is contra-indicated. Soft eggs and milk toast may be taken.

The drug treatment is commonly one of three methods. First is the ipecac plan. Physicians believe they have found it beneficial, although its use is almost entirely empirical. There may be a rational basis in the fact that a profuse flow of bile

is caused. Sixty grains are given, vomiting resulting. Three grains are then given hourly until a profuse black stool is passed. Vomiting is controlled by opium and stimulants are freely used. The second is the purgative plan. Purgation is obtained by the free administration of magnesium sulphate. This is followed by aromatic sulphuric acid. The latter seems rational as bacteria may be destroyed by an acid medium or are at least rendered inert and the drug is astringent. The third plan is that of attempted intestinal antisepsis by bismuth salol, beta-naphthol, mercurials and other drugs. Mercurials at least have the value of increasing the flow of bile.

There seems to be no question as to the value of rectal injections of different kinds, if properly given. Potassium permanganate solution, 2 to 4 grains to the pint, has been so used and is believed to have controlled outbreaks of the disease. The speaker has used sulphocarbolate of zinc solution, 20 grains to the pint of water, and nitrate of silver solution in the same strength. In afebrile condition, with a tender abdomen, ice water injections are grateful. Intestinal lavage should be given very gently and slowly, at least 15 or 20 minutes being taken for the process. If there is much irritability of the bowel it is best to use two catheters, inserting one for the backward flow. Normal saline solution may be used with advantage as may also a solution of quinin which need not be strong as a solution of 1 to 5000 is deadly to the germ.

DR. JAMES TYSON said that his experience with the terminal dysentery of Bright's disease sustained the conclusions of Dr. Flexner. As to treatment, he had used every form except the ipecac method. He has most faith in the purgation method, associated with cold enemas and sufficient opium to quiet irritation.

DR. ALFRED STENGEL gave a plan of treatment which he had used with a happy result. Dr. Cunningham of India, one of the earliest writers upon amebic dysentery, had observed that when the feces were alkaline the conditions were favorable for the growth of the germ, but if the intestine were rendered acid the growth of the germ was inhibited. Upon this basis Dr. Stengel treated a young man who had had amebic dysentery for 4 or 5 years, by giving capsules of sulphur, 10 grains 3 or 4 times a day, guarded with opium. When the stools became acid, the amebæ disappeared and the stools became solid within 24 hours. The brother of this patient was given the same treatment with the same result.

DR. GIBBON asked Dr. Osler whether, in any of the Johns Hopkins cases, colostomy with through-and-through irrigation had been done.

DR. OSLER answered in the negative; he further stated that intestinal irrigation with quinin solution had been efficient; no motile amebæ were found after such a procedure. The speaker referred to the necessity, in colon irrigation, of giving, as Dr. Hare had pointed out, the injection very slowly, of having the hips raised, and of turning the patient from side to side during the procedure.

DR. FLEXNER stated that the outlook for serum-therapy in dysentery is not hopeful. A serum, to be effective in this disease, must probably be antibacterial in its effect. If the blood of apes could be used in the preparation of the serum the results would probably be better.

DR. HARE, in closing the discussion, emphasized the importance of clinically differentiating the forms of dysentery and thus being able to adopt the treatment suitable to the form present. As to the therapeutic use of sulphur, he believes that physicians will come back to its more frequent use; that in amebic dysentery it may have an antiseptic or other favorable effect upon the bowel besides the acid effect.

DETROIT MEDICAL SOCIETY.

Meeting held March 26, 1902.

Roentgen Rays in Epithelioma.

DR. H. R. VARNEY exhibited four patients and narrated their histories and the results of the *x*-ray treatment of the lupus, epithelioma and hypertrichosis previously existing in them. The cases follow:

CASE 1.—Lupus.—Miss F., general health fairly good except neurotic temperament. No history of tuberculosis in family. In October, 1899, a purplish, hard, thickened nodule appeared on her left cheek and slowly increased in size. In a few months other lesions developed on the same cheek, involving about half its area during the first year of the disease. Constant treatment in 1900 and 1901 caused some improvement.

On Dec. 2, 1901, patient was referred to me by Dr. Steinbrecker and his diagnosis of lupus confirmed, it being scrofuloderma ulcerosum, or tubercular gummata. The lesions, six in number, varied in size from a small five-cent piece to a dollar and were deep-seated. The exposures, begun December 2, were of five minutes' duration, four inches from a medium soft tube. No improvement noted until the sixth exposure, when there was a marked diminution in size of lesions and amount of discharge. On Jan. 10, the seventeenth exposure, erythema developed, due to the rays. Exposures were discontinued for ten days, during which time there was marked improvement; lesions became level with surrounding skin normal in color, infiltration and induration all carried away with no scar to mark location of the lesion. Patient had in all twenty-one exposures. Time of exposure from six to nine minutes, covering a period of about ten weeks.

CASE 2.—Epithelioma.—Mr. B., aged 59, old soldier, general health good, works every day. In June, 1900, he noticed a sore place on his nose, with scab constantly forming and falling off, having no tendency to heal. In August, 1900, Dr. McEachren made the diagnosis and cauterized at two different times. On Jan. 29, 1902, the growth being three-fourths of an inch long and a half-inch wide, daily exposures of six minutes' duration were started. The lesion was six inches from tube, other parts of the face being protected by a tin-foil mask. On February 18, erythema developed; exposures were continued, however. February 26, dermatitis noticed, exposures discontinued. March 10, lesion all healed. No crusts have formed since. Patient had in all twenty-six exposures covering three weeks and a half.

CASE 3.—Hypertrichosis.—Miss M. Both cheeks and chin were thickly covered with lanugo hair. When about the age of puberty, the length of the hairs worried her and she cut them with shears and pulled the coarser ones out until the condition became so embarrassing that she shunned all company. Dr. Biddle by electrolysis removed great numbers of the hairs.

Treatment with the rays began Nov. 18, 1901, for six minutes at first, increasing to nine minutes; exposing only the left side.

Patient's health and occupation prevented her from taking regular treatment. On January 17, the hair began falling from area which was first exposed. There has been no return of the hair on the left cheek and two months have elapsed since it fell out. The right side has had no exposures as yet. Thirty-six exposures have been given.

CASE 4.—Epithelioma.—Mr. A., typical growth on left cheek in region of malar bone; of five years' duration.

He began treatment on March 4, 1902. From six minutes on that day the length of exposure was rapidly increased to twelve minutes. That length of time was through the next six treatments. Then dermatitis developed and the time was shortened to eight minutes. The reason for continuing the treatment, after dermatitis developed, was to carry away more of the rapidly disappearing waxy edges. March 21, exposures were discontinued. Sixteen exposures were given.

In the discussion there was brought out the necessity for careful observation of patients and compilation or results, that the foundation of *x*-ray therapy may be as accurate and reliable as possible for the future development of this promising branch of science.

NEW YORK OBSTETRICAL SOCIETY.

Regular Meeting, held April 8, 1902.

Dr. Malcolm McLean in the Chair.

Specimen of Ectopic Pregnancy (Tubal Abortion) with the Fetus in the Unruptured Membranes.

DR. HOWARD C. TAYLER presented this specimen. At the time of operation the right tube was found to be unruptured, its

outer end being distended and occupied by the fetal sac, which was partly in the tube and partly against the pelvic wall.

Retro-Peritoneal Echinococcus Cyst.

DR. TAYLER also presented this specimen and said that the history of the case went back to 1893 when Dr. Tuttle, at the Roosevelt Hospital, removed an echinococcus cyst of the omentum. Three months later Dr. I. Cragin operated upon an echinococcus cyst of the spleen; eight ounces of doughy cysts were evacuated by him and they continued to be discharged for several months later; subsequently the sinus closed and gave no further trouble. In 1901 the patient was again admitted and an echinococcus cyst was located behind the peritoneum and to the right of the rectum and was entirely independent of the uterus and its appendages. Six months after the last operation no trace of the disease could be noted.

Vesical Calculus from a Woman.

DR. EGBERT H. GRANDIN showed this specimen because of its extreme rarity; this was the second one he could recall. The first he saw three years ago and had, as its nucleus, a silkworm gut suture which had not been removed after the repair of a vesico-vaginal fistula. As a rule, in women, a foreign body of some kind is found as a nucleus of a calculus.

DR. MALCOLM MCLEAN said that it was a well-recognized fact that idiopathic calculi requiring removal by operation were rare, but the last woman he operated upon was such a one; there being no nucleus of foreign substance.

Specimens from Three Recent Cases of Early Ectopic Gestation.

DR. ABRAM BROTHERS presented these specimens. The first showed the fetus and ovum intact. In this case the chorionic villi had simply grown through and perforated the peritoneal coat of the tube and caused a fearful hemorrhage. The second specimen was an unruptured tubal pregnancy. The ovary removed with the tube did not show any corpus luteum, showing that the ovum was derived from the opposite ovary through transperitoneal migration. The third specimen showed the well-known form of ruptured tubal pregnancy. On the upper surface of the tube was a gash about one-half an inch long. The accompanying ovary showed very beautifully the corpus luteum. Dr. Brothers said he wished to accentuate the fact that the largest hemorrhages occurring in the early part of ectopic gestation may not come from a true rupture of the tube but from the outgrowth of the chorionic villi which are so vascular that when they have once penetrated the peritoneal coat they cause large hemorrhages.

DR. MCLEAN asked if some such hemorrhage could not come from the contiguous vessels of the tube.

DR. BANDLER said he had seen several cases where only two, three or six villi were found to have perforated the peritoneal covering; not only the ends of the villi but the placental sea, or intervillous space, was involved and thus enough blood entered the peritoneal cavity to produce symptoms of a profound intraperitoneal hemorrhage. Openings only microscopic in character may close and, after days or weeks, another perforation occur at the same, or at another, point.

Colon Bacillus Infection of the Female Genital and Urinary Systems.

DR. ALBERT H. ELY read this paper. He said that the virulency of the infection from the colon bacilli seems to be due to their associated pyogenic organisms, for we often find the colon bacilli present in large numbers in the urine without at times giving any symptoms. Again, when other pyogenic organisms have disappeared, the colon bacillus will remain as the organism which produced a most intractible type of disease; therefore he concluded that a suitable nidus was necessary for their propagation and action. Histories of three cases were narrated. The first showed the normal type of pelvic inflammation followed by evident colon infection, as shown by frequent cultures. The second and third cases illustrated the virulency and persistency of the colon bacilli infection, and how much more active these bacilli became when a suitable nidus for their propagation was afforded. He felt warranted in deducing the following conclusions: 1. There exists as much necessity for thorough cleansing and rendering as aseptic as possible the rectum and colon, as the field of operation, especially when that operation is performed per vaginam. That in all cases of election the routine treatment of mild mercurial catharsis, followed by a saline and irrigation of the colon with salt or boracic acid, should be employed. 2. To reiterate a warning—the best results can be obtained when the intestines receive the minimum degree of trauma from handling and especially from the careless use of retractors, in cases where, for cosmetic effects or fear of hernia, too small incisions are made to permit of operation by sight rather than by touch.

DR. BROTHERS stated that he had had a series of pus cases in which, by microscopic examinations, colon bacilli were found in only the minority of the cases and he could not recall a single case in which the colon bacillus was the only bacteriologic element present.

DR. ELY was surprised at the remarks made by Dr. Brothers. The point he wished to bring out was, if colon bacilli are found, as reported by bacteriologists, even in arthritic joints, why did they vary so much in intensity and intractibility.

TRI-STATE MEDICAL SOCIETY (IOWA, ILLINOIS AND MISSOURI).

Proceedings of the Tenth Annual Meeting, held in Chicago, April 3 and 4, 1902.

The Society convened at the Great Northern Hotel, under the Presidency of Dr. John C. Murphy of St. Louis, Mo.

Ligation of Arteries; Cocain Anesthesia.

DR. B. MERRILL RICKETTS, Cincinnati, Ohio, made a plea for a more general use of cocain for local anesthesia, especially in operations upon the head, neck and extremities. It is more efficacious, more desirable and less dangerous. It has a wide scope of usefulness, although as yet it had been applied to but a limited degree. Reference was made to its application to operations of any character on the extremities, and especially to its application of those involving the blood vessels. Cocain anesthesia would not only permit of the ligation of the more important blood vessels, but celiotomy for various purposes as well. The removal of various neoplasms, malignant and benign, plastic operations upon nerves, cutaneous, muscular and bony structures in a healthy or pathologic state, removal of foreign bodies, or amputation of any part of the upper or lower extremities were advised under cocain anesthesia. Amputation at the shoulder-joint had been successfully accomplished with cocain as a local anesthetic by Crile and, while there was no recorded case for demonstration, there was no reason why amputation at the hip-joint should not now be accomplished in this manner. Resection of ribs and amputation of the breasts should be more frequently done under cocain. Dr. Ricketts advised a 0.5 to 1.5 per cent. solution, and said that an amount of solution containing from 0.5 to 1.5 grains of cocain need not be exceeded in performing any operation.

The great advantage of this method of anesthesia is its freedom from any danger, if it is properly used, and it can be thus applied, which is more than can be said of ether, chloroform, nitrous oxid or any of their combinations. Nausea, vomiting, cephalalgia, nephritis, bronchitis, pneumonia and shock are absolutely avoided.

DR. H. A. LEIPZIGER, Burlington, Iowa, did not believe any surgical operation nowadays was a minor matter. Since the acceptance of bacteriologic factors and the danger attending all surgical procedures, he believed the word minor should be entirely dropped.

DR. FLAVEL B. TIFFANY, Kansas City, Mo., had had some experience in the use of cocain in ophthalmologic operations. He almost always adds adrenalin to the solution and then no hemorrhage results. He had never had bad results from its use, except when he had employed it on mucous membranes.

DR. HAROLD N. MOYER, Chicago, said that the question of cocain as a local anesthetic was still *sub judice*, and, person-

ally, he would prefer to take his chances in the hands of a good anesthetist with chloroform or ether rather than have cocain injected into his spinal cord. He thought the infiltration method of Schleich had been disappointing in many respects, in part due to difficulties in sterilization.

DR. RICKETTS, in closing the discussion, condemned spinal anesthesia, saying that he had never had the courage to resort to it. As to the use of adrenalin, there were some advantages to be obtained from combining it with cocain.

Technique and Possibilities of Endo-Vesical Operative Procedures.

DR. LOUIS E. SCHMIDT, Chicago, mentioned the important points in connection with operative cystoscopes and showed their differences.

1. *Nitze Operative Cystoscope.* Here the lamp, prism and window are on the concave surface of the beak. In front of the space between the lamp and the window the operative appliances are placed. The operative appliance carries in its hollow shaft the optical apparatus. The latter is movable, so that the operative appliance can be brought to different distances and positions from the cystoscope part. These mechanical appliances are the galvano-caustic snare, cautery, small forceps and lithotriptic forceps.

2. *The Casper Operative Cystoscope* differs from the Nitze instrument in that the lamp, window and prism are on the same plane, so that the whole optical apparatus is straight. The operative part is practically similar to the Nitze. Both of these cystoscopes compel the operator to work under indirect vision.

3. *With the Kolischer Operative Cystoscope* the operator works under direct vision. The lamp and window are situated on the convexity of the beak. To the under part of the cystoscope is attached a canal through which the different instruments are introduced into the viscus. Their working end appears just below and in front of the window.

Prenatal Syphilis.

DR. OHMANN-DUMESNIL, St. Louis, Mo., detailed a case of prenatal syphilis. He condemned the use of the terms hereditary or congenital syphilis. He prefers to use the word prenatal, believing that it is more comprehensive and more clearly defines the condition which exists.

Sporadic Infantile Myxedema Resulting in a Cretinoid Condition.

DR. JAMES FREDERICK CLARKE, Fairfield, Iowa, reported a case. The patient, aged 20 when first seen, a marked imbecile of typical cretinoid condition, with a negative family history. The degeneration began at the end of the first year, and was shown by a series of photographs taken every few years through life. Thyroid feeding for the nine months to date showed an increase of two and three-quarter inches in height and a marked transformation as to intelligence and physiognomy. This was illustrated by a series of photographs, taken every two months during treatment. The patient has been taking thyroid tablets in dosage equal to 60 grains of fresh gland every day.

DR. FRANK P. NORBURY, Jacksonville, Ill., said that a boy, aged 9, seen by him in consultation, was fed on thyroidin and the result was satisfactory and pleasing. He said the results of thyroid feeding had been satisfactory in the treatment of such cases.

Pathologic Specimens.

DR. ISAAC A. ABT, Chicago, exhibited some interesting pathologic specimens, including a specimen of diaphragmatic hernia from an infant; a glioma of the cerebellum of the right side from a child of 6 years; intussusception from a marantic baby of 21 months; a picture of the brain and spinal cord from a case of epidemic cerebellar spinal meningitis; adenoma of the liver from a 21-month-old baby, and a photograph showing the location of a spina bifida during life.

Cholecystectomy versus Removal of the Mucous Membrane of the Gall-Bladder.

DR. EMIL RIES, Chicago, presented this paper, confining his remarks to two methods, cholecystostomy and cholecystectomy, the former being a method, practiced by Kehr and Mayo, of stitching a rubber tube into the contracted gall-bladder and making the joint water-tight by a suture around the rubber tube. As an emergency operation, cholecystostomy is satisfactory, but it is not an ideal method. An operation to be compared with cholecystectomy was Mayo's operation of removal of the entire mucous membrane of the gall-bladder and leaving the gall-bladder in place. While this operation seems very reasonable and had been performed by Mayo and others with success, the author considered it open to serious objections. He then reported a patient who had been troubled with gall-stones for 27 years upon whom he operated three months ago, removing a small contracted gall-bladder.

Plastic Surgery in Ophthalmology.

DR. F. B. TIFFANY, Kansas City, Mo., spoke of the use of large skin grafts, to restore lids destroyed by lupus, burns, cancer, etc., taken from remote parts without a pedicle. These grafts embrace the entire skin, are transplanted directly without being passed through any medium, and are put upon a granular surface where they grow without sloughing.

In cases of distichiasis and trichiasis that have been previously operated on and there is no integument to spare, von Milligan's operation is recommended, which consists in splitting the edge of the lid at the mucous line and transplanting a strip of mucous membrane from the lip of the patient, vagina, or from the conjunctiva of a rabbit's eye. In ordinary cases of entropion he uses the electro-cautery, incising the integument near the margin of the lid from one canthus to the other two or three millimeters distant from the margin of the lid; then, from cicatrization the margin of the lid is turned away, correcting the entropion. For ectropion he makes a similar operation, cutting with the electro-cautery the conjunctiva from near the punctum of the outer canthus at a distance of two or three millimeters from the margin of the lid. Sometimes he makes two or three longitudinal incisions. If more than one or two, a third is made at the retrotarsal fold or cul-de-sac. Probably 95 per cent. of all cases that have come to his clinic and private practice of entropion and ectropion within the last three years have been corrected by electro-cautery treatment.

For congenital ptosis, where there is absence of the levator palpebræ superioris, he makes Panas' operation, which gives better results than any other operation that has ever been made up to the present time. The steps of this operation were described and pictures presented of a boy, aged 10, with complete congenital ptosis, in whom there was the absence of the levator palpebræ superioris of each lid. The result was excellent, as shown by the photograph taken subsequent to the operation.

Differential Diagnosis of Smallpox.

DR. J. C. SULLIVAN, Cairo, Ill., emphasized the point that whenever a patient complains of severe and persistent backache, followed by fever and a pustular eruption affecting the palms of the hands and the soles of the feet, protruding from beneath the outer skin, there is a case of smallpox to deal with, no matter how insignificant or mild it may appear, and confluent or even hemorrhagic smallpox may be contracted from it. Hence the necessity of immediate vaccination of all parties exposed and of strict quarantine or isolation in each case. There are but two diseases that produce these phenomena, namely, syphilis and smallpox. The former should not be confounded with the latter, as a history of chancre would suffice for the differentiation. From measles it may be differentiated by Koplik's sign, when found, which consists in the appearance of little white pearly bodies on the inside of each cheek before the faucial redness of early measles. The typical lobster rash, strawberry tongue and persistent white line of that most eccentric of all diseases proclaims scarlet fever; a multiform punctated and individual crescentic rash, rötheln; the successive crops of vesicles affecting the shoulder-blade, probably chicken-pox. A pustule stuck on the surface of the skin, impetigo, lichen planus and papular eczema may be at first confounded with smallpox; but the pustular eruption of the palms of the hands and soles of the feet makes the diagnosis of smallpox positive. The essayist did not believe there

was such a disease as Cuban or Porto Rican itch. The adherents of the theory of a third or intermediate disease similar to rötheln, measles and scarlet fever have strongly fought the idea that modified smallpox could be a true disease, but by repeated examinations and diagnoses the most eminent specialists have named it smallpox. Many admit its contagiousness, but fail to quarantine. In this respect they err, for when a disease, no matter what its name or nature, is contagious, it is the duty of every physician before it becomes endemic or epidemic, to report it to the health authorities and work in concert with them to see that it is at once quarantined until all danger of its communication to others shall have passed.

Conglomerated Cystic Kidney.

DR. J. F. HERRICK, Ottumwa, Iowa, narrated a case of conglomerated cystic kidney and gave the autopsy findings.

Ligation of Common Iliac or of External and Internal Iliacs Preliminary to Amputation of Lower Extremity at Hip-Joint.

DR. AUGUSTUS C. BERNAYS, St. Louis, Mo., said that in many cases Senn's and Wyeth's methods left much to be desired, if it seemed necessary to save the patient from even a small loss of blood. He reported an operation and presented photographs of a case of myxosarcoma of the thigh reaching above Poupart's ligament, in which the ligation of the common iliac enabled him to perform an almost absolutely bloodless operation. The ligation was done through a small abdominal incision made exactly over the brim of the pelvis on the affected side. Dr. Bernays claimed that the aseptic ligation of the iliacs could in no way add to, but would probably lower, the percentage of mortality in those cases in which the ablation of the lower extremity was indicated. He strongly recommended the method in suitable cases. His case recovered in a few weeks.

Hemorrhage After Tonsillotomy.

DR. H. A. LEIPZIGER, Burlington, Iowa, said that tonsillotomy is one of the so-called minor operations, but one which becomes very formidable in case of hemorrhage. Even if there is no fatality, the apparent danger, continuance of bleeding and frequently the inability of the surgeon to arrest the same, create a degree of anxiety for doctor and patient, and a liability to censure and reproach for the doctor alone which should stimulate all surgeons to cease regarding the operation as minor. The patient should be informed of the dangers and examined before operation at least as carefully as before a life insurance examination, which never involves more than a limited amount of money. The operation should never be done in the physician's office, but by preference in a well-appointed hospital. Bleeding will follow a tonsillotome as well as a knife. The commonly advised styptics and methods of arresting the bleeding do so when the bleeding is insignificant; when it is severe they all fail. Even tying the common carotid has failed. There seems to be underlying the parenchymatous oozing some nervous or vasomotor influence which is excluded by syncope or unconsciousness. The latter is obtained by hypodermics of morphin, which were used in the writer's case with sufficient effect to make him believe it arrested the bleeding when all other means had failed.

Psychology as Applied to Modern Medicine.

DR. G. H. EISKEMP, Washington, Iowa, read a paper with this title, referring to the delusions under which a large number of people are laboring. The sudden rise and rapid spread of the religious vagaries and scientific absurdities taught by Eddy, Dowie, Schlatter, Schweinfurth and others form curious chapters in the mental history of our age. How to counteract these modern unwholesome tendencies is the question. Criticism will not do it. Ridicule will not suffice. Such movements are strengthened by denunciation. They fatten on persecution. He thought the death-blow to all such scientific, philosophic and religious vagaries was struck when the truth was shown concealed behind the fallacy. It is at this point that medicine has failed in the performance of her duty. While Eddyism has swung to one extreme, medicine has swung to the other. If the followers of Mrs. Eddy had laid sole emphasis on the psychic, ignoring the physical, the physician, on the other hand, was tempted to confine himself to the physical, leaving out of account the mental. Had physicians studied the psychic side of life as they ought, applying psychologic principles to the treatment of disease, there could be no reasonable doubt that much could have been done to counteract these delusions. Why should the physician leave this interesting and important field to the untrained quack to make of it a matter of merchandise? That many human ailments are of mental origin and can be healed by purely psychologic means, there can be no question. Into many others the psychic entered as a very important element. This being so, in order to successfully treat the human body, one must know something of the human mind, its laws and methods of working. Without this knowledge, accurate diagnosis of disease, in some instances, is impossible. When carefully diagnosed, it might turn out that the patient needed the good offices of a clergyman, a psychologist, or a neurologist. At all events, the physician must be able to make the diagnosis, whoever effects the cure.

Man was something more than a bundle of nerve cells, bones, blood vessels and various kinds of tissue. Therefore, the successful practitioner must interest himself in something besides physical symptoms and matters of organic function. So long as man is made of body and mind, so long as these continue to influence one another, just so long will the study of the psychic side of human nature be a valuable part of the equipment of him who ministers successfully to its physical side. That a new emphasis would be put upon the psychologic element in the future, the author had every reason to believe. It was his firm conviction, arising from a conception of the profound need of such investigation, that the time was ripe for a forward move in this direction.

(To be continued.)

Medicolegal.

South Dakota Statute Compliance with Law Presumed.—In the case of Webster vs. Lamb, an action brought to recover for professional services, to which a general demurrer was interposed, the Supreme Court of South Dakota says that it was not necessary to allege in express terms that the party suing had obtained a license from the board of health and had duly recorded the same. It therefore affirms an order overruling the demurrer. It says that the general presumption that every man is innocent of crime renders it unnecessary, in a civil action, to plead or prove compliance with statutes of this character, and a sued party desiring to put the point in issue must do so by way of answer.

Cause of First Fracture that Also of Rebreaking Leg.—In the personal injury case of the Postal Telegraph Cable Company vs. Hulsey, as it is now entitled, but which was brought by the latter party, it appeared that during the time he was confined to his bed from his broken leg and was not able to sit up, he had something like colic one night, accompanied with vomiting; that he went to turn over on his side, to keep from vomiting on his bed, and felt something like a sting in his thigh. The evidence tended to show that at that time the leg was rebroken, or the fracture disunited after it had begun to unite. There was no pretension that the leg was rebroken by any conscious fault of his. Under these circumstances, the Supreme Court of Alabama holds that, if the leg was rebroken, it was a natural result, or one liable to happen from the cause of its being broken in the first instance, having immediate and causal connection therewith. But for the original breaking, it says, the rebreakage could not have occurred.

Examinations Made by Experts for State.—In the homicide case of the State of Connecticut vs. Rathbun complaint was made of the refusal of the trial judge to give the jury an instruction framed for the evident purpose of discrediting the evidence of the state concerning the results of certain chemical and medical examinations. The requested instruction was to the effect that such evidence, being of examinations made not in the presence of a representative of the accused, should be carefully considered in view of the possibility of a failure to

seek for or develop facts and conditions to the advantage of the accused which an impartial and complete investigation would have disclosed. Such instructions, involving an insinuation, if not assumption, that the examinations in question were not impartial or complete, the Supreme Court of Errors of Connecticut holds, the accused was clearly not entitled to have. The judge, it says, told the jury to give all the evidence calm and conscientious consideration. There is no rule of law which compelled him to single out this particular evidence of the state for special caution as evidence coming from a tainted source, as in the case of the evidence of an accomplice.

Entitled to Hearing Before Board of Health Itself.—A New Jersey law requires the consent of the municipal authorities and local board of health to the location or enlargement of any cemetery, and provides that in case of the refusal of the municipal authorities and local board of health to grant such consent, application may be made to the state board of health. Under this provision, if the municipal authorities consent, and the local board of health refuses to grant permission to the location of a cemetery within the municipality, the Supreme Court of New Jersey holds, in the case of State (Dodd and others, Prosecutors) vs. State Board of Health, that this is a refusal to grant consent, within the meaning of the act, and application may be made to the state board of health to reverse such action of the local authorities. But what is of still more general interest, the court holds that, in hearing an application in such a case, the state board of health acts judicially, and persons interested have a right to be heard before that board. For example, in this case, when the application to locate a cemetery was presented to the state board of health, it was referred to the standing committee on cemetries, burial, and transportation of the dead, for investigation and report. That committee consisted of the president of the board, ex officio, and two other members. An investigation of the site of the proposed cemetery was made by the medical inspector of the board and one of the members of the committee, and the result of the examination submitted to the board by the medical inspector, and a hearing given by the same committee. At that hearing two members were present. The committee seems to have made a report to the board, but no other hearing was actually held by the board itself. The court says that the board of health was acting judicially upon the application before it, and all who were interested in that application were entitled to be heard by the board in a legally organized meeting of the board. The delegation to a committee to examine and report upon facts was within the power of the board, but the parties were entitled to be heard by the board upon the significance of those facts, and the legal questions which the situation gave rise to. The prosecutors were freeholders and taxpayers in the township, and, as such, were entitled to be heard before the state board of health. Because no proper hearing was given, the court sets aside the action of the state board of health in the case.

Salicylic Acid in Fruit Syrup Under Pure Food Law.—The Supreme Court of Pennsylvania says, in the case of Commonwealth vs. Kevin, that the purpose of the "Pure Food Law" of that state was to prevent the adulteration of food, the term "food" including all articles used for food or drink by man. In case of food, an article shall be deemed to be adulterated within the meaning of this act, for one thing, it is provided therein, "if it contains any added substance or ingredient which is poisonous or injurious to health." Here, however, where the prosecution was for selling raspberry syrup containing salicylic acid, it was contended that, if the jury should find from the evidence that the single bottle actually sold did not contain salicylic acid in sufficient quantities to be poisonous, or injurious to health, there should be an acquittal. But the Supreme Court does not adopt that construction of the law. It says that it is not a poisonous or injurious compound resulting from the addition of a foreign ingredient that the clause quoted declares to be an adulterated article. The terms of the clause declare against a compound that is formed by the addition of a poisonous or injurious ingredient. The guilt of the accused, therefore, did not depend upon the nature or character of the compound resulting from the addition of the salicylic acid to the fruit syrup, but was to be determined solely upon the poisonous or injurious qualities of the acid which was the ingredient added to the food. And the court affirms a judgment of conviction. Nor does it consider that the above clause offends against any provision of the constitution of the commonwealth. It says that it does not prevent the admixture of pure articles as a food, nor prohibit the addition of a healthful ingredient as a fruit preservative. It is directed against the introduction into a food product of a substance foreign to it, and of a poisonous or injurious nature. The evidence in the case would justify no other conclusion than that salicylic acid is poisonous and injurious to the human system.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Hyperemia of the Conjunctiva.

Drs. Wood and Woodruff, in *Med. Standard*, recommend the following treatment of hyperemia of the conjunctiva: Remove the cause if possible and apply cold locally to the closed eyelids three or four times a day. In a few cases hot water is more effective than cold water. Following the application of cold or hot water, several drops of a soothing, non-irritating solution should be instilled into the conjunctival sac as follows:

℞ Acidi borici ..... ℥ss 2
Sodii biboratis ..... ℥ss 2
Aquæ rosæ ..... ℥ii 8
Aq. destil. q. s. ad ..... ℥ii 60
M. Sig.: Instill locally into the eye.

If the lids are gummy or show a tendency to adhere in the morning a little simple ointment should be gently rubbed on the eyelashes at night. Sometimes a more stimulating lotion is desired, as follows:

℞ Zinci sulph. ..... gr. i-ii | 06-12
Aq. destil. ..... ℥i 30 |
M. Sig.: Apply locally once or twice daily.

In the same journal they advise the following in the treatment of ophthalmia neonatorum:

℞ Hydrastin sulph. ..... gr. v | 30
Acidi boracici ..... gr. v | 30
Sodii biboratis ..... gr. v | 30
Tinct. opii ..... ℥ss 2
Aq. destil. ..... ℥i 30 |
M. Sig.: To be instilled into the eye every hour.

Other solutions may be used as follows:

℞ Potassii permanganatis ..... gr. i | 06
Aquæ destil. ..... ℥viii 240 |
M. Sig.: To be dropped into the eye once or twice a day; or:
℞ Hydrarg. bichloridi ..... gr. ss | 03
Aquæ destil.. ..... ℥viii 240 |
M. Sig.: Drop into the eye daily.

According to them, chlorin water is very efficient when much pus is secreted:

℞ Aquæ chlori ..... ℥vi 25
Aq. destil. ..... O. i 480
M. Sig.: Apply locally.

Cuprol in Conjunctivitis.

According to von Sicherer, as stated in *Ther. Month.*, cuprol is a new remedy employed in the treatment of conjunctivitis which he claims has proven to be of great value in numerous cases treated by him. Cuprol represents an organic combination of copper and nucleinic acid and contains about six per cent. of copper. It is readily soluble in water, especially in hot water, and forms a clear solution, even with albuminous substances, producing no coagulation. In the presence of alkalies no precipitate takes place. He employs a 10 per cent. solution prepared in warm water. He states the following principal ad-

vantages of this preparation over the other organic preparations of copper: 1. A 10 per cent. solution causes no pain or only very slight pain. 2. The tissues are but slightly irritated. He employs the remedy chiefly in cases of acute and chronic catarrhal conjunctivitis, but it may also be employed in the treatment of phlyctenular conjunctivitis.

Uncontrollable Vomiting.

The following outline of treatment is recommended by *Jour. de Med. de Paris* for checking persistent vomiting in pregnancy or from other causes:

℞ Cocainæ hydrochlor. ..... gr. ii | 10
Antipyrin ..... gr. xv | 1
Aq. destil. q. s. ad ..... ℥iiiss | 100
M. Sig.: One teaspoonful every half hour; or:
℞ Cocainæ hydrochlor. ..... gr. viii | 5
Aquæ destil. ..... ℥iss | 6
M. Sig.: Six drops, repeat in one hour, then in three hours; after this three or four drops before each meal.

As a local application to the cervix in vomiting of pregnancy or acute metritis:

℞ Cocainæ hydrochloratis. ..... gr. xv | 1
Ext. belladonnæ ..... gr. iv | 25
Vaselini ..... ℥iiss | 75
M. Sig.: Apply locally once a day on a tampon.

Suppurating Wounds.

Schwarz, in *New York Med. Jour.*, recommends the following as a local application in suppurating wounds:

℞ Pulv. iodoformi
Salol
Bismuthi subnit.
Pulv. charcoal
Pulv. cinchonæ
Pulv. benzoini, āā ..... ℥ii | 8
M. Sig.: Apply locally once daily.

Quinin as a Dressing.

J. Read, according to the *Med. News*, recommends a mixture of quinin and cod-liver oil in the treatment of various skin troubles, combined as follows:

℞ Quininæ sulphatis ..... ℥i | 4
Olei morrhuæ ..... ℥viii | 240
M. Sig.: Shake well and apply locally.

He employs it in the treatment of tertiary and rheumatic ulcers of the leg, gangrene of the skin, burns in which large surfaces have sloughed away. He states that it has the advantage of supplying the system with an oily food and a tonic drug.

AS A WASH IN TREATMENT OF CHANCROID.

℞ Creosoti ..... m. iii | 20
Hydrarg. bichloridi ..... gr. iv | 25
Glycerini ..... ℥ii | 60
Aquæ rosæ ..... ℥iii | 90
M. Sig.: Apply frequently as a wash.

To Relieve Tympanites.

The following is of great service to relieve the distress caused by gas collecting in the lower bowel:

℞ Mag. sulph. ..... ℥ii | 60
Spts. terebinthinæ ..... ℥i | 4
Tinct. asafoetidæ ..... ℥iss | 45
Mucilag. acaciæ ..... ℥ii | 60
Aq. destil. q. s. ad ..... O. i | 480
M. Sig.: As an injection by a high rectal tube.

Scarlet Fever.

Ames, in *Phys. and Surgeon*, emphasizes the following points in the eradication of scarlet fever: 1. Every suspected case of scarlet fever should be isolated until a conclusion is reached. 2. The family should be instructed to maintain isolation until all signs of peeling have disappeared. 3. All members of the family who desire to leave the house, should do so on the first day after their clothing has been disinfected by exposure to formaldehyd gas for six hours. 4. The attending physician should have as little contact with the patient as possible; cleanse his hands thoroughly with a bichlorid solution and disinfect his clothing. He states that formaldehyd, ten ounces to 1000 cubic feet, will destroy all germs.

For the Itching in Scarlet Fever.

The following combination is recommended to relieve the itching in scarlet fever:

℞ Ung. picis liq. ..... ℥i | 4
Ung. zinci oxidi ..... ℥ss | 15
Vaselini albi q. s. ad ..... ℥ii | 60
M. Sig.: Apply locally once or twice a day.

Neuralgia of the Fifth Nerve.

Barber, as noted by *Amer. Med.*, states that he effected a cure of trifacial neuralgia of three years' duration by the administration of one granule, containing 1/10 of a milligram of aconitin, every four hours for three days, followed by:

℞ Ferri sulphatis (exsic.) |
Ext. anthemis, āā ..... gr. viiss |
M. Ft. pil. No. ii. Sig.: Two such pills daily for two weeks.

As an Antineuralgic Ointment.

Menier, according to the *New York Med. Jour.*, recommends the following formula as a local application in the treatment of the different forms of neuralgia:

℞ Pulv. opii ..... ℥ss | 2
Ext. belladonnæ
Liq. petrolati, āā ..... ℥iii | 12
M. Sig.: Rub in thrice daily, continuing the frictions for five or ten minutes at each application.

Local Treatment of Rheumatic Arthritis.

℞ Methyl salicylatis ..... ℥iii | 12
Spts. chloroformi ..... ℥ii | 8
Menthol ..... ℥ss | 2
Lanolini ..... ℥iv | 120
M. Sig.: Apply locally to the affected joint night and morning.

General Toxemia.

Shelton, in *Clinical Rev.*, recommends as the most efficient measure in the treatment of those poisons generated in the alimentary canal, the following:

℞ Fel bovis (oxgall) |
Guaiacol carb., āā ..... gr. ii | 12
M. Ft. cap. No. i. Sig.: One such capsule before each meal; or:
℞ Fel bovis (oxgall) |
Benzonaphthol |
Pancreatin, āā ..... gr. ii | 12
M. Ft. cap. No. i. Sig.: One such capsule before each meal.

Worms.

According to Scholl, in *Jour. Med. and Surgery*, the best treatment for expelling worms is santonin, which is prescribed probably more than any other drug. He recommends that it be given in powder form on bread and butter or in the form of lozenges; and sometimes he combines it with calomel. He states that it is destructive to both the thread and round worms and their ova. He always combines or follows the administration of the santonin with a purgative, as it assists in the expulsion of the worms and ova. The best plan is to give the anthelmintic at night and follow with the laxative the following morning. Overdoses should not be given.

Bursae of the Knee.

Bjorkman, in *Merck's Archives*, recommends the following local applications in the treatment of bursæ of the knee where surgery can not be employed:

℞ Ichthyoli ..... ℥i | 4
Ung. kalii iodati ..... ℥i | 30
M. Ft. Unguentum. Sig.: Rub in well three times daily; or:
℞ Ichthyoli ..... ℥i | 4
Olei ricini ..... ℥ss | 2
Spts. etheris ..... gr. xlv | 3
Acidi salicylici ..... gr. xv | 1
Collodii q. s. ad ..... ℥iss | 45
M. Sig.: Apply with a small brush once or twice a day.

Indications for the Use of Phosphoric Acid.

Martinet, as quoted by *Ther. Month.*, describes a number of cases to support his statement that hypo-acidity of the urine, accompanied by an abnormally large amount of phosphates, is

frequently the index of hyperchloridia in the stomach. On the other hand, hyperacidity of the urine and a small proportion of phosphates suggest hypo-acidity in the stomach, with hypo-acid dyspepsia, stasis of the food, acid fermentation, etc. In such cases, he states, the administration of phosphoric acid may promote digestion and check the acid fermentations by its eupeptic and antiseptic action.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal, April 12.

1 *State Care of the Insane. L. J. Morton.
2 A Case of Round-Celled Sarcoma of the Stomach, with Secondary Manifestations in the Already Adenomatous Thyroid. John McCrae.
3 *Reflections on Some of the Causes for the High Death-Rate and High Venereal Non-Efficiency of the Tropics. P. R. Egan.
4 *The Mammary Glands in Primiparæ. Theresa Bannan.
5 *The Management of Cases of Cephalo-Pelvic Disproportion by the General Practitioner. Edward A. Ayers.
6 *Surgical Shock from a Clinical Standpoint. Eugene Boise.
7 A Case of Sarcoma of the Tonsil. Arthur G. Root.
8 A Phenomenon Observed on the Tongue in Acute Malarial Infection. Lucien Lofton.

Medical Record (N. Y.), April 12.

9 *The Traumatisms of Pregnancy. Denslow Lewis.
10 *A Clinical Report Relating to (a) Hemorrhage Persisting Notwithstanding Curettage, and (b) Secondary Hemorrhage Following Abdominal Section. Egbert H. Grandin.
11 *General Treatment of Measles. Louis Fischer.
12 Rhinoliths and Foreign Bodies in the Nose. J. M. Ingersoll.

American Medicine (Philadelphia), April 12.

13 *What Can We Diagnosticate in Acute Appendicitis? Willy Meyer.
14 *Rheumatic Appendicitis—A Study of the Relation of Rheumatism to Appendicitis. Willim A. Edwards.
15 *Indications for the Mastoid Operation. Philip Hammond.
16 The Epidural Method and Its Indications. Dudley Tait.
17 Acute Lymphatic Pseudoleukemia: With Report of a Case and Autopsy. John L. Heffron.
18 Gastrotomy for Removal of Foreign Bodies. George F. Inch.
19 *Palmar and Plantar Syphilids. William F. Bernart.
20 Spontaneous Rupture of the Heart. Don D. Grout.

Boston Medical and Surgical Journal, April 10.

21 *The School in Its Effect upon the Health of Girls. E. G. Brackett.
22 *The Health of School Girls. Robert W. Lovett.
23 *Statistics Regarding Health of School Girls. Edward M. Hartwell.
24 *The Effect of Public School Education upon the Health of the College Girl. Jane K. Sabine.

Philadelphia Medical Journal, April 12.

25 *Rubella and the "Fourth Disease." J. P. Crozer-Griffith.
26 *A Case of Intermittent Claudication, Terminating in Gangrene. I. Harris Levy.
27 *Ophthalmia Neonatorum. Reynolds Wilson.
28 Adenoid Vegetations and Their Influence on the Palatal Arch. Frederick H. Milliener.
29 Vaccination. T. F. Campbell.
30 *The Relation of the Tubercle Bacillus to Pseudoleukemia (Sternberg's Disease). (Concluded.) Joseph Sailer.

Medical News (N. Y.), April 12.

31 *On Amebic Abscess of the Liver. William Osler.
32 Spa Treatment of Gout. Charles C. Ransom.
33 *On the Early Diagnosis of Pleuritic Effusions. James K. Crook.
34 Report of a Case of Removal of the Gasserian Ganglion. John F. Erdmann.
35 *The Etiologic Classification of Varicose Veins of the Legs. William S. Terriberry.
36 A Peculiarity of Vision, with Illustrative Cases. Frederick C. Riley.
37 *The Misleading Significance of Ovarian Pain. C. Lester Hall.

Cincinnati Lancet-Clinic, April 12.

38 When I Studied Medicine. Geo. J. Monroe.
39 Gonorrheal Rheumatism. J. Douglas Westervelt.

Northwestern Lancet (Minneapolis), April 1.

40 Report of a Case of Spinal Sarcoma. O. C. Strickler.
41 A Continuance of the Discussion of the Technic in Abdominal Operations. A. W. Abbott.
42 The Place of Specialism in the Education of the Undergraduate. Frank C. Todd.
43 Osteitis Deformans. O. A. Fliesburg.
44 Whooping Cough and Quarantine. E. S. Stroud.

The Medical Age (Detroit, Mich.), March 25.

45 A Mixed Clinic in a Colored Hospital—Mumps, Emphysema, Conjunctivitis, Lobar Pneumonia, Lung Inflammation, Hysteric Aphonia and Hemiplegia. Louis F. Bishop.
46 *Surgical Treatment of Hypertrophy of the Prostate. Max Ballin.
47 The Modern Therapy of Gonorrhea in the Male. William C. Martin.

Medical Review of Reviews (N. Y.), March 25.

48 Diagnosis of the Infectious Exanthemata. F. C. Curtis.

St. Paul Medical Journal, April.

49 Henry J. Bigelow; A Sketch. T. W. Thorndike.
50 Remarks on Typhoid Fever. William S. Thayer.
51 Prostatectomy. C. H. Mayo.
52 Dropsy Without Albuminuria. F. M. Manson.
53 A Brief Description of the Hospitals of Manila, with a Few Notes on Plague. Harry Morell.
54 Intestinal Obstruction. Acute Appendicitis. Warren A. Dennis.
55 Old Hip-Joint Dislocation. C. P. Thomas.

International Medical Magazine (N. Y.), March.

56 *Clinical and Pathologic Observations of Enteroptosis. John C. Hemmeter.
57 *Enteroptosis, with Special Reference to Displacement of the Colon. Fenton B. Turck.
58 Nephroptosis. A. L. Benedict.
59 The Ultimate Results of Nephrorrhaphy. Charles P. Noble.
60 Nephropexy for Prolapse of the Kidney. Austin H. Goelet.
61 Gastroptosis. Allen A. Jones.
62 Overflow Facial Contraction from the Orbicularis Palpebrarum in Paralysis Agitans and Spastic Conditions of the Face. (Preliminary Note.) D. J. McCarthy.
63 Movable Kidneys; Their Effect upon the Gastric and Intestinal Functions. Boardman Reed.

Louisville Monthly Journal of Medicine and Surgery, April.

64 Optic Neuritis in the Young, with Report of Five Cases. William Cheatham.
65 Three Cases of Acute Nephritis. H. E. Cottell.
66 The Treatment of Goiter. James S. Chenoweth.
67 The Pathology of Appendicitis. James R. Bullitt.
68 Report of a Case of Complete Procidentia of Uterus with Cystocele and Enterocele, Twenty-six Years' Duration. John K. Freeman.
69 Gonorrheal Conjunctivitis with Involvement of the Mucous Membrane of Nose and Upper Lip. J. D. Kiser.

Illinois Medical Journal (Springfield), April.

70 *Lymphatic Leukemia. James B. Herrick.
71 Three Points in the Treatment of the Deformities of Infantile Paralysis. John L. Porter.
72 Sequestration and Other Dermoids. L. L. McArthur.
73 *Suggestive Therapeutics. Arthur E. Prince.
74 Electrolysis—The Only Successful Treatment in a Certain Variety of Granular Eyelids. P. Dombrowski.
75 Surgical Cell Activity. James E. Coleman.

Maryland Medical Journal (Baltimore), April.

76 A Consideration of the Bottini Operation for Enlargement of the Prostate, with Report of Some Cases. George Walker.
77 A New Combined Electro-cautery Incisor for the Bottini Operation for Prostatic Obstruction. Hugh H. Young.
78 Upton Scott, M.D., of Annapolis. Eugene F. Cordell.

Annals of Gynecology and Pediatry (Boston), April.

79 Surgery as a Last Resort. Florus F. Lawrence.
80 A Case of "Habit Tic" in a Child Two Years and Three Months of Age. John H. Stein.
81 A Case of Anencephalus. Amzi W. Hon.
82 The Outlook for Hysterectomy for Cancer. A. Lapthorn Smith.
83 Shoulder Presentation Occurring Twice in the Same Patient. Frank C. Hammond.
84 The Vermiform Appendix. John B. Murphy.

University of Pennsylvania Medical Bulletin (Philadelphia),

85 *The Surgical Treatment of Sterility Due to Obstruction at the Epididymis, Together with a Study of the Morphology of Human Spermatozoa. Edward Martin, J. Berton Carnett, J. Valentine Levi and M. E. Pennington.
86 Student Life in the Middle Ages. Roswell Park.
87 Melanosis of the Cerebrospinal Meninges. D. J. McCarthy and Maryck P. Ravenel.

Colorado Medical Journal, February.

88 The Evolution of Medical Institutions in Colorado. C. D. Spivak.
89 Clayton Parkhill, Citizen-Soldier. General Irving Hale.
90 Clayton Parkhill, Anatomist and Surgeon. J. N. Hall.
91 Smallpox and Pregnancy. A. C. Magruder.

Fort Wayne Medical Journal-Magazine, March.

92 On the Porderline of Surgery. Bayard Holmes.
93 Early and Accurate Diagnosis and Prompt Operation in Appendicitis. C. A. Daugherty.

The Physician and Surgeon (Detroit and Ann Arbor, Mich.), January.

94 Smallpox, with Special Reference to the Cases at Ann Arbor and Bronson. James R. Arneil.
95 *The Management of Crossed Eyes in Children. Walter R. Parker.
96 *Bacilli Which Resemble the Bacillus Tuberculosis. David M. Cowie.
97 *The Diagnosis and Treatment of Incipient Tuberculosis. Johnson W. Hagndorn.
98 The Therapeutic Status of Animal Extracts. William R. Chittick.

Toledo Medical and Surgical Reporter, April.

99 Chronic Nephritis. P. George Tait.
100 The Eye as a Factor in Medical Diagnosis. Charles Lukens.

101 Juvenile Cataract with Especial Reference to the Lamellar Form—Report of Cases. Francis W. Alter.
102 Ten Hysterectomies. Charles Betts.

Proceedings of the Pathological Society of Philadelphia, March.

103 Saccular Aneurysm Arising from the Ascending and Transverse Parts of the Arch of the Aorta. H. A. Hare and Randle C. Rosenberger.
104 Streptococcus Mucosus (Howard) and Its Relation to Micrococcus Lanceolatus. Walfield T. Longcope.
105 Primary Carcinoma of the Liver. H. D. Jump and J. D. Steele.

Vermont Medical Monthly (Burlington), March 25.

106 Remarks on the Etiology and Pathology of Nephritis. M. J. Willse.
107 Chronic Gastritis and Its Treatment. G. G. Marshall.
108 *Notes on the Value of Veratrum Viride. A. T. Woodward.
109 The Etiologic Relation of Nephritis to Cardiac Disease. H. Edwin Lewis.

Dominion Medical Monthly (Toronto), March.

110 Duties of a Nurse in Abdominal Surgery. Herbert A. Bruce.
111 Vomiting in Infancy and Childhood. R. E. Hawke.
112 The Anatomic Factor in the Production of Baldness. George Elliott.

New Orleans Medical and Surgical Journal, April.

113 *Enuresis. E. M. Dupaquier.
114 *When Not to Operate in Anomalies of the Extrinsic Muscles of the Eye. E. A. Robin.
115 Epistaxis: Its Causation and Treatment. Gordon King.
116 Thyroid Extract in Urticaria. J. N. Roussel.

Columbus Medical Journal, March.

117 Beri-beri. Starling S. Wilcox.
118 Retroflexion of the Uterus, a Sequence of Pelvic Inflammation. Treatment and Results of Surgical Replacements. James U. Barnhill.
119 Some Truths Concerning Alcohol. Francis W. Blake.
120 Enlarged Turbinals. Ola S. Hendrixson.

Texas Medical Journal (Austin), April.

121 *Reply to a G. U. Critic. Winfield Ayres.
122 *What Shall We Do with Our Consumptives? C. H. Wilkinson.
123 Accouchement Forcé. W. J. Matthews.

Medical Summary (Philadelphia), April.

124 Treatment of Burns. Frank R. Brunner.
125 The Mission of Surgery in Obstetrics. H. Wm. Wormley.
126 Observations About Variola. L. G. Doane.
127 A Few More Remarks on the Treatment of Premature Alopecia. Ross H. Skillern.
128 The Theory of La Grippe and of the Exhaustion Following the Same. Joseph E. Harris.
129 Cancer Cured with Induction-Galvano-Faradism—Incontrovertible Evidence. Wm. A. Armstrong.
130 The Management of Chordee. J. A. De Armand.
131 Calcium Sulphid. W. H. Bentley.
132 Practical Notes (Dysentery, etc.). J. F. Griffin.

Nashville Journal of Medicine and Surgery, March.

133 *Analgesia by Intra-spinal Cocainization. R. E. Fort.

International Journal of Surgery (N. Y.), April.

134 Some Abdominal Tumors Which Require Operations. W. L. Estes.
135 Aortic Aneurysm, with Report of a Case. Wilbur F. Sterman.
136 Nose and Throat Work for the General Practitioner. (Continued.) George L. Richards.
137 The Surgical Assistant. Walter M. Brickner.
138 Epilepsy Due to a Large Exostosis of the Skull—Recovery from Operation and Improvement in the Epileptic Attacks. H. T. Miller.
139 A Case of Extensive Burns. A. J. Bradbury.

Medical Times (N. Y.), April.

140 Compatible Medication, or the Physical Forces in Scientific Formulation. E. C. Hebbard.
141 The Nature of Continued Fevers. M. Heineberg.
142 Puerperal Eclampsia and Septicemia, with Report of Cases. J. B. Mooney.
143 Foreign Body in the Eye. T. C. Evans.
144 Management of Smallpox to Curtail Its Spread. D. S. Humphreys.

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1. **State Care of the Insane.**—Morton's paper covers the general subject of treatment of the insane, favoring state care to a certain extent, holding that many cases, however, can be cared for at home. On account of the prejudice against public institutions, he advises the sending of patients that can not be cared for at home to private institutions at first. He does not think that the asylum physician should have more than 50 patients to care for and does not favor the bed treatment as especially necessary. He is conservative in regard to the use of hypnotics and sedatives.

3. **Tropical Diseases.**—Egan comments upon the high death rate in the tropics and describes the striking neglect of ordinary sanitary precautions in Porto Rico. The death rate in that island has been about twice the birth rate and is largely attributed by the author to the neglect of sanitation. The two greatest causes of death are anemia and tuberculosis, the former twice as common as the latter, and he doubts the importance of ankylostoma as a factor in its production. He finds the parasites present in a very large percentage of all patients. He says that if Porto Rico were not naturally one of the most healthy countries in the world all the people would have been dead long since from one cause or another. Concerning venereal disease in the army he approves of the British plan of depriving a soldier of his pay for every day that his services are lost to the government through his immorality. Only a certain proportion of the cases really require hospital treatment, and yet all who are ordered to hospital by the line officers—sometimes through syphilophobia—must go. He speaks particularly of the handicap the army surgeon has in having orders carried out if the line officers in command do not choose. He thinks a reform is necessary in this regard and claims that the proportion of venereal cases in hospital, which sometimes is 20 per cent., could be reduced to 1 or 2 per cent. by discharging those for whom the only necessity is that they report regularly for medicine and dressing.

4. **The Mammary Gland in Primiparae.**—After describing the anatomy and physiology of the gland, Bannan mentions the hygienic treatment before delivery, and insists on its importance. She believes mothers should nurse their children and says that it has a healthful reflex influence. In the treatment of cracked nipples, if only one is affected it should be relieved of its duty; if both are affected a compromise system should be followed, and only the one least affected used. Massage and bandaging is the most satisfactory treatment. The importance of the breast binder in primiparæ is emphasized. Whatever principles of surgery are thus outraged, it is better than suspending the function altogether and trusting the babe to the doubtful issue of artificial feeding.

5. **Pelvic Deformities.**—Ayers' paper takes up the question of what shall be done in such deformities as will prevent the birth of a living child. He says that when the deformity leads to the employment of version, forceps or craniotomy, a large percentage of still births is the result. Cesarean section and symphysiotomy are discussed and he insists on the greater ease and security of proper preparation for symphysiotomy in the ordinary surroundings and says: "In considering this operation, I do not refer either to the suprapubic and postpubic Italian method of operating, or to the open anterior French method, but to my subcutaneous method heretofore described. In order to secure thoroughly satisfactory conditions for operation, the following are needed: A scalpel, bistoury, steel male urethral sound, a soft-rubber retention catheter, two china wash-bowls, forceps, absorbent cotton, adhesive plaster, and clean hands of at least one individual—the operator. No needles, sutures, sterilized cloths, or dressings are required. The genital region is washed with soap and water, then with bichlorid solution. The instruments are placed in a solution of either carbolic acid or lysol. The urethra is held to one side, the symphysis severed by introducing the bistoury under the clitoris upon the face of the joint, as heretofore described, while hemorrhage is prevented by pressing a wet wad of cotton on the small opening. The child is delivered with the forceps, the after-birth removed, the catheter inserted (after bringing the pubic bones together), the wings of the pelvis are strapped with adhesive plaster, and the wound completely closed by bringing the knees together and binding them. In the after-treatment, such a sling as Dickinson's can be readily set up, if my hammock-bed is not available. The manipulations which may have preceded this operation need not affect its results, as the wound is above the vaginal orifice and away from its discharges. In one of my cases, in which infection of the genital tract followed a sloughing of the posterior vaginal wall from an old cicatrix, the joint wound healed by first intention." The recent greatly improved results in Cesarean section are due not only to improved method but to early performance; he points out, however, that the mortality in late years is greater than in symphysiotomy. There are probably many more craniotomies being performed to-day than

Cesarean sections or symphysiotomies because there have not been proper opportunities for the general practitioner to prepare for major obstetric operations and he has been justified in his conservation of maternal life at the expense of the infant.

6. **Shock.**—The explanation of shock given by Boise is that there is a tetanoid condition of the heart and peripheral arteries, both together producing a low arterial pressure, from lessened blood supply, and he believes that the cause of the whole is due to over-irritation of the entire sympathetic system; it is not a paresis of the secretory nerves, but an overstimulation. The remedies which he suggests are nitrite of amyl and nitroglycerin, and he considers strychnin—at present the most popular drug—as positively dangerous. The use of normal salt solution of rather high temperature, 115 to 118, given intravenously is also recommended in preventing shock, though if it is simply intended to supply the blood loss by hemorrhage the subcutaneous method will suffice.

9. **Traumatisms of Pregnancy.**—Lewis' article is a lengthy review and discussion of a large number of cases. He favors abdominal section as an easy course and one that relieves the patient more often than does trusting to chance. If no sufficient lesion is found it can not be said that it adds materially to the risk.

10. **Uterine Hemorrhage.**—Several cases are reported by Grandin of persistent hemorrhage from the uterus and of hemorrhage following abdominal section. He believes that, after an elective abdominal section, the word shock means hemorrhage. If internal hemorrhage occurs within twenty-four hours after such operation, as in his patient, it is sufficient to warrant us in re-opening the abdomen. He contends also that vaginal section will enable us to settle this question, which is of vital moment to the patient and to our reputation. We should free our minds, however, of the thought of that bugbear, shock, remembering that the symptomatology is essentially different and that the free use of morphin ought to make a differential diagnosis for us.

11. **Measles.**—The hygienic, dietetic and medicinal treatment of measles is described by Fischer. The first consists in guarding the child from any unnecessary exposure to heat or cold, with thorough disinfection of discharges from the nose, ears and mouth, and securing rest and quiet. If there is an exanthema, mild diaphoretic treatment may be indicated. He advises the use of liq. ammon. acetat in half dram or dram doses every one or two hours to produce diaphoresis. If the temperature is below 102 no further drug treatment may be required. It is important to watch the stomach and bowels, hence stimulation of the emunctories will be urgently demanded in this pre-eruptive condition. All the body functions must be carefully watched. For the medicinal treatment he suggests one-drop doses of tincture of aconite when it is necessary to have both the antipyretic and diaphoretic effect. In very weak or rickety children great care should be used, and where convulsions are likely to occur hot mustard foot baths and the ice bag or cold applications to the head used and bromid of sodium in 10-gr. dose given by the mouth if the nervous symptoms are severe. For vomiting he would give the stomach rest, resorting to rectal alimentation and medication if necessary. Great care should be taken in the use of purgatives. Phosphate of sodium in 10 to 30 gr. in water is a useful laxative and so are small doses of citrate of magnesia. Very small doses of calomel, 1/10 gr., two or three times a day may also be used. We should remember that intestinal catarrh is one of the dangers of the disease. Water should be given liberally; fruit juice may be added to it. When the nose and the pharynx discharge freely and irritate the child, irrigation with some bland antiseptic, such as 1 per cent. boric acid solution, is useful, but if there is a catarrh involving the nose and throat as well as the bronchial mucous membrane and the accumulated secretion is annoying, an emetic is advised. Most children cough and swallow their expectoration and a dose of castor oil may be useful. For emesis he suggests the compound syrup of squills every half hour or syrup of ipecac in dram doses, but when neither of these are effective he finds sulphate of copper in one-half or one grain doses in the same intervals valuable. For the distressing cough, especially at night, steam, impregnated with eucalyptus or oil of thyme and small doses of codein can be employed. Two or three grain doses of chloral hydrate can be used for a child three years old. He has had little good from heroin and sometimes unfavorable symptoms. The complication of pneumonia requires symptomatic treatment. High fever may require tepid sponging or local tepid pack, but cold baths and cold packs do not seem so well borne as in other febrile diseases. The oiled-silk jacket, if the case is not an abnormal febrile type, covering the whole thorax and applied next the skin is very valuable. Dry cups applied posteriorly are useful for dyspnea. He has used antipneumococcic serum in one case, but of course no conclusions can be drawn. The child made a perfect recovery. If diphtheria is a complication the usual treatment is required. Antitoxin should be considered as early as the diagnosis is made. He does not believe, however, in immunizing doses of antitoxin during the course of measles to protect from possible diphtheria. If the child is nursing, breast milk is the diet to be used. In case of bottle-fed babies the greatest care must be exercised in feeding. With gastric symptoms the interval should be increased and a smaller quantity administered. When violent gastric symptoms prevail in spite of all precautions, absolute rest of the stomach is necessary and rectal feeding should be used if required. In older children buttermilk may be substituted for milk and concentrated foods such as cream and butter may be given. Thus a small quantity of cream rather than a large quantity of milk if the stomach will tolerate it will be beneficial. Soups, broths, eggs and paps of oatmeal and milk are indicated. In older children calf's-foot jelly, chicken jelly, raw scraped steak and oysters in addition to broths and milk and cream may be allowed. Fruit and fruit juices may be given ad libitum. The convalescence and restoration to the normal condition depends on the nutrition rather than on drugs.

13. **Appendicitis.**—The question of how to diagnose appendicitis is the subject of Meyer's article. While he believes it always a surgical disease, he asks whether it is possible to prophesy what course may be followed. As regards the refinements of diagnosis he mentions that it is often possible to locate the position of the acutely inflamed appendix within the first days of the disease by going over the right half of the abdomen with the tip of one finger. Although McBurney's point will invariably be found to be painful to the touch, still more intense pain can often be elicited on pressing a spot above or below the omphalospinous line or posteriorly to the caput coli in the lumbar region. In a case of unmistakable acute appendicitis the greatest pressure pain is found not on but somewhat above this line and along the crest of the ileum or, if it is principally marked in the right lumbar region, we shall rarely go wrong in assuming that the appendix is situated posterior to the caput coli. Dr. Meyer has never been disappointed in this sign. If, on the other hand, digital examination by the rectum or vagina demonstrates the greatest tenderness or a painful mass on the right side of the pelvis, we shall, almost without exception, find the appendix in its normal position. He believes that attempts to directly palpate the acutely inflamed appendix throughout its length are usually unsuccessful and he here gives Meltzer's method of examination as follows: Under normal conditions the appendix should rest in the right iliac fossa, that is to say, on the ileopsoas muscle, from which it is separated by the parietal peritoneum, the extraperitoneal or transversalis fascia and the ileopsoas fascia. Active contraction of this muscle will, of course, increase the volume of the belly of the same and therewith raise the appendix thus situated upward toward the anterior abdominal wall. If now the examining fingers are pressed gently but deeply down into the iliac fossa at or near McBurney's point, and the patient is directed to slowly lift his straightened and outwardly rotated lower extremity so as to form nearly a right angle with the trunk; in other words, if we direct him to thus make flexion at the hip, such an appendix will thereby be subjected to increased direct pressure and hence become still more painful than before. It will also in this way sometimes become more or less distinctly palpable. If, on

the other hand, the result of this kind of an examination is negative, I should think we might be justified in concluding that the appendix is not resting on the ileopsoas muscle, but running in a different direction. Elsberg claims also that: by accepting McBurney's point as the base of the organ, its further course might be determined by the spot of greatest *subjective* pain, as repeatedly pointed out by the patient upon being questioned regarding the same. The doctor stated that in this manner he had succeeded in correctly diagnosing the position of the organ in 49 out of 58 cases. Should further experience prove this method too to be reliable in the greater majority of cases, it may frequently prove of value to the surgeon. If the patient persistently locates the principal subjective pain to the left side of the lower abdomen in a case of undoubted acute appendicitis, we may infer that the vermiform is long and hangs down into the small pelvis. Vaginal or rectal palpation will frequently verify such an assumption. But this diagnosis of location and possibly also of the length of the inflamed appendix is of practical importance to the operator only because it tells him where to incise, while for the general practitioner it is of little value. With him it is not a question of direction, but of recognizing the clinical seriousness of the attack. He further asks if we can conscientiously claim to be able to diagnosticate at the present time with regard to the pathologic lesion of the appendix in its acute inflammation during the first two or three days of the disease, as long as the inflammation is still confined, in its principal part at least, to the appendix as such, and as long—he emphasizes this point—as no tumor of any kind is palpable in the region of the appendix. From the basis of his experience covering hundreds of cases during sixteen years he is obliged to answer in the negative, and he doubts whether we will ever be able to do this. He does not, however, wish to have it understood that we should discontinue our efforts to sharpen our diagnostic capabilities in regard to these points. He advises then in the interest of our patients, that we be satisfied with our ability to diagnose the given case: 1, as one of acutest inflammation, which has already transgressed the border lines of the appendix and involves the peritoneal cavity to a greater or lesser extent, in consequence of a macroscopic perforation of the organ, or without the presence of same; or 2, as one of acute inflammation, that is most probably still confined to the appendix as such, although its immediate neighborhood appears more or less involved; or 3, as one of subacute inflammation. Let us allow such diagnosis to furnish the indication for or against prompt operation. Let us continue to tell the general practitioner to go on diagnosing acute appendicitis first of all on these lines. It is often by no means an easy task for the average man, and in some instances for the specialist, to render the differential diagnosis between acute appendicitis and other acute inflammatory lesions within the abdominal cavity. Let us, therefore, not complicate matters still more by expecting the physician to also diagnose the exact anatomic lesion of the organ before deciding whether or not prompt surgical intervention be needful. As a third division of his subject, he asks what we can diagnose in the degree and extent of a complicating peritonitis. He remarks that in the great majority of cases acute appendicitis is accompanied by localized peritonitis. Localized palpable tumor in the region of the appendix means pus formation or the deposition of plastic lymph with tendency to pus formation in the great percentage of cases. While pressure pain over the left lower abdomen speaks for a more intense, often spreading peritonitis, paresis of the large intestine, tympanitis, continued vomiting, general abdominal and rectal tenderness, dulness on percussion of the right iliac fossa and over the whole lower abdomen suggest a spreading or fully developed general peritonitis with or without effusion. An important sign is pain on pressure in the left lumbar region, the part farthest away from the usual seat of disease—if we exclude the subdiaphragmatic space. With chill and the other symptoms mentioned and pain in the left lumbar region, the diagnosis will then be found to be correct. He gives a point as regards the diagnosis of subacute and acute appendicitis during the interval and says: If a patient was suddenly taken sick with pain in the lower abdomen and consecutive localization of the same in the right groin, but without the simultaneous occurrence of a number of stools, especially of loose diarrheal stools; and more important still, if nausea and vomiting accompanied the trouble, if gas and feces could not be passed for hours or days, if an increased pulse rate, localized pressure pain and, possibly, rise of temperature were noticed, such a disease was most probably—at least in the male—an attack of acute or subacute appendicitis. If a right movable kidney is present and the attack occurred independently from the advent of menstruation, the probability of the disease having been an attack of acute or subacute appendicitis, gains ground also in the female sex. Further direct examination must clear up such a case. If gynecologic examination be negative, if gallstones can be excluded, if urinary analysis does not point to disease of the kidney, and if we are able to palpate a painful cord, corresponding to the location of the appendix, our diagnosis promises to be correct. He has had little faith in the palpation of appendicitis, and admits his inability to do what is claimed by some authorities. He suggests the danger that palpation may cause rupture of the focus into the general peritoneal cavity or the re-awakening of slumbering processes.

14. **Rheumatic Appendicitis.**—Going over the authorities and replies received to questions sent to physicians concerning appendicitis in the distinctly rheumatic individual, Edwards remarks that the testimony is almost unanimously against the existence of a condition styled rheumatic appendicitis. He would therefore summarize by saying that, 1, the present state of our knowledge does not warrant the use of the term rheumatic appendicitis; 2, there seem to be but two conditions in which rheumatism can at all be considered in etiologic relation to appendicitis, and these are when a rheumatic endarteritis of the single appendicular artery exists and the blood supply is greatly diminished thereby. It seems to be conceded that the entrance of fecal matter of itself does not necessarily give rise to appendicitis, but it is probable that the inflammation may have its origin in the micro-organisms conveyed to the interior of the organ by the fecal matter. Even if rheumatism is an infectious disease and the infection is due to staphylococci, whose seat is in the gastro-intestinal tract, it may be probable that the feces in these cases are unusually toxic, but this again is far from proved, so that when considering a so-called rheumatic appendicitis we must resort to the old Scotch verdict—"not proven."

15. **Mastoid Operations.**—The main points discussed in regard to mastoid operations are summarized in the paper by Hammond as follows: 1. Mastoiditis is always subsequent to purulent inflammation of the middle ear. 2. Tenderness of the bone is an important symptom when present, but the mastoid may be full of pus, with absolutely no tenderness. 3. Bulging of the canal wall is a most important symptom. 4. The absence of temperature is no guide whatever. 5. Improvement in the hearing is usually indicative of subsiding inflammation in the middle ear. 6. The operation is safe, and delay may be dangerous.

19. **Palmar and Plantar Syphilids.**—Bernart finds that in 200 successive cases, eliminating patients who had forgotten their history, 17.5 per cent. suffered from either palmar or plantar syphilids or both sometime during their disease. He gives details of some of the cases. He thinks that while this percentage may be larger than that found elsewhere it indicates that such lesions are found more frequently than ordinary observation would lead us to believe. In cases where it occurred, in nearly 60 per cent. both surfaces were diseased; the palms alone followed next with about 35 per cent., while the plantar surfaces were alone affected in only about 1 per cent. Nearly 50 per cent. more of soft and tender hands were affected as compared to others; this shows that irritation and friction do not play an important part in the production of palmar lesions.

21. **The Health of School Girls.**—Brackett finds from statistics that females make up the larger number of applicants for hospital treatment of physical developmental defects. It impresses the physician who sees a large number of children to

observe the large number of girls that are anemic and nervous, and the very marked difference between their condition and that of the boys at the developmental stage. Much of this trouble he lays to the overstrain of our present system of school education and holds that the school is responsible for very many of the conditions in so far as it demands interference with the necessary amount of sleep and outdoor play and it does not sufficiently recognize the difference between boys and girls and between different individuals.

22. **The Health of School Girls.**—Lovett's article follows the same general line, reviewing the facts so far as known and giving such data from his own investigations as he has been able to obtain. He finds that the number of pupils that leave school on account of their health, especially in the high and normal schools, is much greater among females than males. There is no consensus of opinion that girls leave school with their health improved over that at the time of their entrance and some teachers were definite in their statement that the girls were not as well on the average. He thinks the remedy lies in the development of physical training in a proper school gymnasium under proper conditions. For this purpose a gymnasium is imperative as exercises in the school room are not effective. This seems to be the general consensus of opinion among teachers. At present the general health of the school girl at puberty is far from what should be desired and what seems to be the result of school work plus outside demands.

23. **The Health of School Girls.**—Hartwell's article is more confined to statistics than the others and he does not find from his figures that a disproportionate number of girls are obliged to leave the Boston public schools because of impaired health. It is only in the high and Latin schools that the losses are considerable, and if overpressure exists there is where we should expect to find evidence of it. He holds the medical profession fully responsible as educational authorities for the present neglect of school hygiene and the undeveloped state of vital statistics relating to the school population, but he admits that physicians are somewhat more alive than the teachers to the needs of the situation.

24. **The Health of the College Girl.**—Sabine, in taking the statistics of 2000 students in finishing schools and colleges, finds that there is a defect and that the college girl does not represent exactly the type that she should in the physical point of view.

25. **Fourth Disease.**—Griffith considers that it would be a calamity if Duke's fourth disease could be proven to exist. From his study of the subject he says there is no reason for and every reason against its existence. He thinks that every infectious disease is liable to variation in its type both in the individual and the epidemic, and that aberrant cases and forms and even aberrant epidemics occur. We can not give separate names to every such form. The history of rubella shows that it is particularly liable to vary. We have yet to see rubella scarlatiniforme, as generally understood, fail to protect from an attack of rubella morbiliforme or vice versa.

26. **Intermittent Claudication.**—The case reported by Levy was an apparently complicated one showing some of the typical symptoms of Charcot's disease and also some of those of erythromelalgia. He thinks we are warranted in called it one of those mixed cases which show the close relation between these disorders and Raynaud's disease. The appearance of felons is also mentioned as being analogous to such conditions in Morvan's disease.

27. **Ophthalmia Neonatorum.**—According to Wilson the demands of treatment and prophylaxis of this disease are: 1, the antepartum care of the birth canal; 2, the scrupulous cleansing of the lids following expulsion of the head and constantly thereafter in suspicious cases; 3, the noninvasion of the palpebral sac by separation of the lids before the appearance of typical discharge; 4, prompt and absolute isolation upon the appearance of conclusive signs of specific inflammation; 5, thorough and systematic irrigation; 6, astringent application of silver nitrate in cases of prolonged suppuration. In conclusion, as an important adjunct to local treatment attention should be given to the general condition of the child in cases of debility and malnutrition. The measures directed toward the care of the infant are comprised in cod-liver oil inunctions, small doses of whisky internally and breast feeding. At the same time the mother should receive some form of tonic treatment.

30. **Pseudoleukemia.**—Sailer's paper, which was commenced in the last issue, is ended in this. He reviews Sternberg's cases and comes to the conclusion that we can not speak dogmatically as to the tubercular origin of this condition. None of the evidence heretofore presented can be regarded as decisive, but the gradual accumulation of positive facts, as Pinkus says, and the absence of entirely satisfactory negative evidence, rather tends to confirm the supposition that the majority of cases of pseudoleukemia, if not all, will ultimately be recognized as tubercular.

31. **Hepatic Abscess.**—Five cases of hepatic abscess of amebic origin are reported by Osler which are of interest as showing the latency of symptoms and the liabilities to error in diagnosis. In one case the abscess was not large and the symptoms were negative, with absence of fever, chills, sweats and leucocytosis until just before the operation. There was, however, a marked diffuse cyanosis that is still unexplained and localized swelling above the right costal border which was found to be associated with adhesions between the liver and costal margin with no signs of abscess pointing in this direction. In another case the symptoms led to a diagnosis of malignant disease, and still another, of empyema. Osler calls attention to the leucocytosis which was particularly absent in three of the cases. They contradict the statement, made by some, of the invariable presence of this condition in hepatic abscess. In one case there was no ulceration of the intestine, though there may have been dysentery months before which had healed.

33. **Pleurisy.**—Crook describes first a hypothetic case with symptoms diagnosed as pneumonia, but the patient does not pass through the ordinary course of the disease and fails to get well. It is possible the physician may now recognize the true nature and give the diagnosis as pleuropneumonia and save his reputation, but it is not always the case, and sometimes because the condition is not early enough recognized the patient is lost. He emphasizes certain distinguishing points and says the initial chill and subsequent temperature range are not reliable guides; we should hesitate in diagnosing pneumonia without rusty sputum. The variation in the respiration and pulse ratio is important. If the respiration is so increased that the ratio is 3 to 1, 2 to 1 or perhaps 1 to 1, the case is probably pneumonia. A marked increase of the circumference of the affected side may be taken as absolute evidence of accumulation of fluid, but the contrary does not always hold good, for it may force its way upward instead of sideways. Displacement of the viscera, especially the heart, is of the utmost value in effusion, and it should be borne in mind that the border of the percussion dulness does not always show an exact hydrostatic level. In some cases it may even rise to the summit of the lung. It requires a good deal of care to look after these patients. If we are still in doubt we should not hesitate to employ the exploring needle. It is only by this means that we are able to determine positively whether an effusion be of a serous or of a suppurative character, or to diagnose with certainty the presence of encysted accumulations.

35. **Varicose Veins.**—An etiologic classification of varicose veins is made by Terriberry with a distinction between those cases which occur with a predisposing cause and those in which there is no acquired or congenital defect in the vascular apparatus. Further, with or without predisposing cause, all cases of varicose veins may be placed in three groups: 1, those due to regurgitation following stenosis above the saphenous valves; 2, those cases due to regurgitation with stenosis inferior to the saphenous valves, and 3, those cases due to stenosis without regurgitation.

37.—This article has appeared elsewhere. See abstract in THE JOURNAL of March 15, 1902, p. 734.

46. **Prostatic Hypertrophy.**—The history of operations is reviewed by Ballin, whose conclusions are as follows: 1. The regular use of the catheter in hypertrophy of the prostate gland is dangerous, as it causes inflammatory processes in bladder and kidneys. 2. Therefore prostatic hypertrophy with retention of urine, which would necessitate the use of the catheter several times a day and placing the catheter in the hands of the patient, ought to be treated by operation. 3. Bottini's operation is preferable and sufficient in most cases; some cases are better treated by prostatectomy. 4. A good diagnosis of the kind and shape of prostatic enlargement and of all complicating factors—cystitis, nephritis, etc.—is essential for the selection of the suitable operation, and also for its successful performance.

56. **Enteroptosis.**—Hemmeter finds the etiology of enteroptosis one of the difficult questions. He is rather in favor, however, of the theory of Rosengart that it is a pathologic reversion of the location of the abdominal organs to an embryonic state, at least in congenital cases. He insists that the best means of diagnosing are the finger, the sight and the hearing. He deprecates too much dependence nowadays on technical and artificial methods to the exclusion of the more natural ones which are often more effective in many cases. He mentions especially the change of sound in the stomach containing liquid, the splashing sound and Stiller's sign of the floating tenth rib, which he has found present in 78 out of 130 cases. The introduction of the rectal Langdon tube or sound is of value, and he believes that it can be introduced clear up to the cecal opening. Still another method is distension of the colon by air or water; air alone blown in by bellows will frequently give the desired information without the necessity of the more troublesome method of using water. The treatment of enteroptosis should be directed to strengthen the general constitution by proper diet, hygiene, use of air, electricity, arsenic, massage and baths, all of which have their share of usefulness. The correctly applied plaster bandage laid on the nude figure in strips and a special straight-front corset, which has a tendency to press the intestines upward, thereby making a cushion for the stomach, colon and kidneys to rest on is also very useful. If the patient is emaciated, a fattening cure should be undertaken. Surgical interference is to be avoided.

57. **Enteroptosis and Displacements of the Colon.**—Turck's article deals especially with displacements of the colon, which he considers largely due to the following general etiologic factors: 1. Any condition that induces an increased capacity in the abdominal cavity. 2. Constriction of the thorax. In many cases there are no symptoms, and in some cases of coloptosis the symptoms disappear after treatment, but ptosis remains. There are, however, permanent mechanical disturbances due to prolapse, viz., dragging on the mesentery, pressure on the kidney and weakness of the visceral muscles, producing chronic irritation of nervous symptoms and hysteria and neurasthenia. As regards treatment something might be done for the prophylaxis provided we control the heredity. We are not yet, however, able to do this. For the girl, the advantages of open-air life should be enjoyed and constriction of the thorax should be avoided. As regards the enteroptosis occurring after childbirth he believes that if proper hygienic habits had existed before, artificial support would hardly be required. The principal indications for treatment of colonic displacement are, 1, atony and dilatation; 2, vasomotor disturbance of the splanchnic vessels; 3, lax conditions of the abdominal walls. The methods are similar to those for gastro-enteroptosis combined with fresh air, exercise and dress reform, gastric lavage, abdominal support, rest, abdominal exercises, drugs, nux vomica and laxatives, rectal enemata and abdominal douches. In his own treatment Turck obtains just the same results as in washing out the stomach contents, by the use of a thin rubber bag attached to the end of the tube. This produces a much more effective gymnastic exercise of the pyloric end, and a still more effective method is to use hot or cold air instead of water. The use of the gyromele produces, as Ewald states, a thorough cleansing of the membrane and its adherent mucus, and, naturally, also a strong stimulation of the gastric wall. Lavage of the stomach in the morning is also useful as Fleiner remarks. Large rectal enemata are harmful as they stretch the intestine and increase atony. Small quantities of water are better. Gymnastic exercises of the colon correspond with those used in the stomach, details of which can be found in other papers by the writer. The treatment of lax abdominal walls by exercise (International Clinics, Volume II, 11th series) has proven very satisfactory and where there is a separation of the rectus muscles, which is considered the cause by Webster, the operation he recommends is the best for the condition, with continued prolonged after-treatment.

70. **Lymphatic Leukemia.**—This condition is described by Herrick, who holds that it is probably not so rare as generally supposed, and that the more carefully the blood is examined the more frequently will some of the cases of supposed pseudo-leukemia be found to be genuine lymphatic leukemia. It is a well-known fact that in many pseudo-leukemias a slight relative increase in lymphocytes is met and at times a sudden transformation of the blood, the blood being flooded with lymphocytes. This is the so-called transformation of the pseudo-leukemia into the true lymphatic leukemia. Some authors, including Pinkus, take the ground that there is practically no sharp dividing line between the two conditions and that many transitional forms are met. Herrick also suggests that probably some of the severe anemias, in some cases classed as scurvy and purpura, may show similar blood conditions; the impression is also conveyed that these cases of acute leukemia are acute infections or virulent toxemias. He remarks on some of the peculiarities in the cases that he has seen.

73. **Suggestive Therapeutics.**—Prince's paper is an interesting one, giving an account of a number of cases where he used suggestion with decided advantage, especially in morbid conditions of the eye. He lays especial importance on the operator finding out the key to the patient's delusions, without which it may be impossible to effect a cure even if the entire confidence of the patient is gained.

85. **Sterility.**—This article by four authors reviews the microscopic characters and the morphology of spermatozoa and gives experimental studies and clinical observations of their vitality. The conclusions, which they consider to be fully determined by their study of the subject, are: "In sterile marriages the fault certainly lies with the husband in from 10 to 15 per cent. of cases; probably in a still larger percentage. Though absence of motile spermatozoa is a proof of sterility, their presence does not necessarily demonstrate that the semen is fertile. Microscopic study shows that spermatozoa, although they are alike in general characteristics, differ greatly, even in the same individual, in conformation, size and color reaction. In spite of these differences, it seems possible to recognize the normal and probably fertile organisms. In their passage through the epididymis the spermatozoa undergo developmental changes so marked as to be easily recognizable; hence, it is probable that the epididymis is not a mere conduit. The prolongation of motility is a better index of fertility than the mere fact of motility. The commonest local cause of sterility in the male is obliterating bilateral epididymitis of urethral origin. Bilateral epididymitis is comparatively rare. Permanent obliteration of the tube of the epididymis is its exceptional rather than its usual termination, and is most effectually avoided by prolonged treatment. When the obliteration persists it is in the tail of the epididymis. Azoöspermia resulting from obliteration in the tail of the epididymis can be easily and safely overcome by forming an anastomosis between the head or body of the epididymis and the vas. Ejaculations following this anastomosis swarm with motile spermatozoa. Whether these be fertile and whether the vaso-epididymal anastomosis will persist, can be determined only by prolonged observation." An extensive bibliography is appended to the paper.

95. **Strabismus in Children.**—Parker points out the im-

portance of early treatment of strabismus and, in young children who can not yet use glasses, he advises removal of all books, pictures and toys that require close observation, substituting for them, wagons, hobbyhorses, balloons, etc., which do not tax the vision. The child should not be sent to kindergarten, and if these measures do not prevent the squint from developing, a weak solution of atropin, one grain to the ounce, should be instilled into the eyes once or twice daily to partially suspend the power of accommodation. In this way the child may be cared for until old enough to wear glasses, which can be used by some children as early as three years. The shadow test and other means make the fitting of glasses to children perfectly reliable after the complete suspension of accommodation by mydriatics, and a full correction of the refractive errors should be given to be worn constantly. The eyes should be retested once a year and refitted if necessary to decrease the strength of the glass as given to correct farsightedness. The use of glasses will frequently cure the squint, but should they fail, cover the good eye for an hour, twice daily, thus enforcing the use of the squinting eye. By this means the vision may be improved and the loss of co-ordination corrected. The stereoscope can often be used for older children; by marking corresponding points on the two pictures, and asking the patient to interpret them, one can tell which eye or if both eyes are being used. By the variation of pictures the child is not only being treated but entertained. The vast majority of cases, however, will not be cured by means other than surgical, and if at the sixth or seventh years the squint is permanent and constant with or without glasses, surgery should be resorted to. If each test, however, shows a different error, indicating that the abnormal condition is not fixed, it is advisable to wait until the eyes and muscles are more fully developed. A premature operation may lead to a turning out of the eye, while neglect may lead to impaired vision. Success requires the study of each individual case.

96. **Pseudo-Tubercle Bacillus.**—Cowie mentions certain forms of bacilli closely resembling the tubercle bacillus, such as Hanson's bacillus and the smegma bacillus. The only reliable test is animal experimentation for the smegma bacillus, but the catheter test comes next in value. It is made by thoroughly sterilizing the parts, using a sterile catheter and collecting the urine in a sterile receptacle. After this the sediment is examined by staining with hot carbolic fuchsin, washing, immersing in 15 to 25 per cent. nitric acid solution and then immediately transferred without washing to absolute alcohol, where the specimen remains a short time until excessive redness is gone. The alcohol is washed off and the specimen counterstained in methylene blue, mounted in water and examined. Any acid-resisting bacilli present are probably tubercle bacilli.

97. **Incipient Tuberculosis.**—Hagadorn lays much stress on the temperature curve in incipient tuberculosis as a diagnostic sign. He regards a temperature that is normal or practically so after 5 or 6 p. m. of great diagnostic importance. The temperature is usually normal between 7 p. m. and 10 or 11 a. m., but as a rule there is a rise between 2 and 5 p. m. of from one to two degrees. The pulse acceleration is also of importance and also gastric disturbance. The physical signs should also be looked for, such as a slightly lessened movement in the supraclavicular or infraclavicular region, diminished expansion of one side of the chest, breathing slightly diminished in intensity, especially during inspiration. The following method he considers very important: The patient's hand is placed on the opposite shoulder. The physician then listens over the portion thus uncovered by the scapula, just above and external to the giving off of the bronchial tubes, where there will be heard prolonged tubular breathing and fine râles on coughing, which is one of the principal signs of phthisis, making diagnosis possible weeks before other signs are present. Contrary to many authors he believes that rheumatic diathesis, when the white fibrous tissue is involved, predisposes to tuberculosis. The hygienic and medicinal treatment are reviewed.

108. **Veratrum.**—Woodward believes in the value of veratrum, especially in inflammatory conditions, and insists on the importance of a tincture of fresh roots. In a given case of decided phlogistic tendency we should commence with not more than four drops of Norwood's tincture. If at the end of an hour the heart's action is not reduced in frequency or otherwise, give 5 drops and so on increasing one drop an hour until the pulse shows a change. He has such belief in the drug that he says he feels it almost his duty to take off his hat to it "in profound respect for its value."

113. **Enuresis.**—Dupaquier advocates general treatment in the main, directing attention first to the examination of the urine, to the detection of some disease of the blood, from bacterial, metabolic or diathetic source, and depends on the use of water, hygiene, diet and exercise to ameliorate the system first and then the use of local treatment in persistent cases. While belladonna is almost universally recommended, it has to be given in such large doses that it sometimes produces unpleasant and alarming effects.

114. **When Not to Operate in Strabismus.**—Any cause of muscle imbalance, says Robin, whether a tendency to incorrect turning of the eye, aphoria, or an actual malposition, atropia, requires before operation, 1, a thorough study of the patient's age (actual, not in years), employment, general health, social position, character and psychologic state, both habitual and at the time he applies for relief; 2, careful measurement under atropin of all errors of refraction and the constant and persistent wearing of glasses correcting as nearly as possible the total amount of defect; 3, the patient and persevering endeavor in esophoria or esotropia to re-establish balance by enforced rest of the accommodation with atropin and in exophoria or exotropia by muscle gymnastics, general tonics, outdoor exercise and a suspending of all eye work at the near point.

121. **Mercurol.**—Ayres replies to Lydston's criticism in a former issue of the *Texas Medical Journal*, holding that mercurol, while not a drug that will control every case, is the most reliable and easily borne preparation of mercury that he has ever used. It can not, however, be given in solution for it oxidizes quickly, a point which has not been mentioned elsewhere than in his former article. He gives it in the form of tablets in 1 gr. dose, three times a day, adding one more grain per day every fourth day until a slight salivation or looseness of the bowels is apparent. Every grain of mercurol contains 1/10 of a grain of pure mercury which, of course, is a large dose.

122. **Tuberculosis.**—Wilkinson points out the climatic advantages of western Texas for the consumptive.

133. **Intraspinal Cocainization.**—Fort believes that this method of producing anesthesia is usually without serious post-operative symptoms, is not contra-indicated by any condition, and claims its use is imperative when general anesthesia is contra-indicated.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below.

British Medical Journal (London), April 5.

1 *The Causation of Death During the Administration of Chloroform. (To be continued.) E. H. Embley.
2 *A Contribution to the Study of the Presence and Formation of Agglutinins in the Blood. M. Armand Ruffer and M. Crendiropoulo.
3 *Progress Report upon the Biologic Test for Blood as Applied to Over 500 Bloods from Various Sources. George H. F. Nuttall.
4 *The Diagnostic Value of the Variations in the Leucocytes and Other Blood Changes. Leonard Rogers.
5 *The Condition of the Blood in Filariasis. G. Lovell Gulland.
6 Observations on the State of the Vascular System After Death by Asphyxia and by Cardiac Failure. J. A. MacWilliam.

The Lancet (London), April 5.

7 *The Comprehensive Study of Thoracic Phthisis. F. T. Roberts.
8 *The Etiology of Typhoid Fever and Its Prevention. W. H. Corfield.
9 *Results of the Vaccination of 1060 Adults. H. Sinigar.
10 The Surgery of Non-Malignant Gastric Ulcer and Perforation. (Concluded.) C. B. Keetley.
11 *The Supposed Infectivity of Desquamation in Scarlet Fever. C. Killick Millard.
12 *The Topical Application of Mucin in Certain Affections of the Nose, Throat and Ear. William Stuart-Low.

Indian Medical Gazette (Calcutta), March.

13 *Some Practical Suggestions for the Prevention of Malarial Fevers. G. T. Birdwood.

14 Cocain as an Intoxicant and Its Demoralizing Effects. K. C. Bose.
15 The Therapeutics of Semi-Carpus Anacardium. Hem Chandra Sen.
16 Notes on the Prevalence of Filariasis in the Calcutta Police Force. C. R. M. Green.
17 Observation of the Clotting Power of the Blood in Plague Patients. Alice M. Cothorn.
18 *An Unusual Form of Bubonic Plague. J. Chaytor White.
19 Quartan Fever in Calcutta and Dacca. (Continued.) U. N. Brahmachari.
20 Some Cases of Cerebrospinal Meningitis. J. Rutter Williamson.

Intercolonial Medical Journal of Australasia (Melbourne), February 20.

21 An Analysis of Seven Hundred Consecutive Confinement Cases. H. Osburn Cowen.

Gazette Hebd. de Med. (Paris), March 20 to April 3.

22 The Permanent Sound in Treatment of Urinary Infections. H. Berthier.—"Du drainage par la sonde urétro-vesicale à demeure dans la thérap. des inf. urin."
23 Primary Infantile Atrophy and the Soluble Ferments. L. Concetti.
24 Gold Wire and Some New Instruments for Operating on Inguinal Hernia. J. Tansini (Palermo).
25 Sudden Luxations of the Hip Joint in Incipient Coxalgia. Jouon.
26 Pneumococcus Meningitis. Results of Lumbar Puncture. Ch. Achard.
27 Distribution of Human Actinomycosis in France. A. Poncet.
28 (Case Reports) Varicellic Arthritis. Lacasse.—Acquired Hydrocephaly Consecutive to Gastro-Enteritis.

L'Obstetrique (Paris), 1902, 2.

29 *Intervention in Cases of Deformed Pelvis. P. Bar (Paris).—"Dans le cas de viciation pelvienne."
30 *Natural Utilization of the Extra-Embryonal Part of the Ovum. L. Bouchacourt (Paris).—"De l'utilization de la partie extra-embryonnaire de l'oeuf."

Presse Medicale (Paris), March 22 to April 2.

31 Sexual Anomalies. H. Roger.
32 Study of Sero-Agglutination in Tuberculosis. E. Rumpf (Friedrichsheim).
33 *Treatment of Neurasthenia. R. Romme.
34 Morphinomania. Auto-Observation of a Physician. Reported by Debove.
35 Prophylaxis of Purulent Conjunctivitis. A. Trousseau.
36 Simultaneous and Independent Cancer on Both Lips. H. Morestin.
37 Aspirin in Therapeutics. E. Guibal.
38 Passage of Agglutinin from Mother to Fetus in Typhoid Fever. A. Rouslacroix (Marseilles).
39 Prophylaxis of Venereal Diseases. G. Fischer (of the Army).
40 Why and When Should Quinin be Administered? A. Martinet.

Semaine Medicale (Paris), March 26.

41 Suppurations in the Sub-Phrenic Zone. F. Lejars.—"Les sup. de la zone sous-phrénique."

Centralblatt f. Chirurgie (Leipsic), March 29.

42 *Further Experience with the Ether "Rausch" in Operating. P. Sudeck (Hamburg).—"Ueber das Op. im Aetherrausch."

Centralblatt f. d. Grenzgebiete (Jena), March 18.

43 *Round Ulcer of the Duodenum; Review of the Literature from 1891 to 1900. R. Laspeyres (Bonn).—"Das runde Duodenalgeschwür." Commenced in No. 1.

Centralblatt f. Inn. Med. (Leipsic), February 15 to March 29.

44 *Serum Treatment of Acute Infectious Diseases. E. Walger (Erbach).
45 *Differentiation of Cystitis and Pyelitis. G. Rosenfeld (Breslau).
46 Connection Between Dyspeptic Disturbances and Affections of the Female Genitalia. A. Sommer (Graz).
47 *Curative Effect of Anesthetics. G. Spiess (Frankfurt a. M.).
48 Contrast Staining of the Blood. R. May (Munich).—"Ueber Blutfarbungen."
49 Statistics of Pleuritis. J. A. Grober (Jena).
50 Case of Bacteriuria Vesicalis Post-Gonorrhoica Due to Bact. Lactis Aerogenes. B. Goldberg.

Deutsche Med. Wochenschrift (Leipsic), March 27.

51 *Technic of Examining the Pupil. O. Schirmer (Greifswald).—"Zur Methodik der Pupillenuntersuchung."
52 Best Methods of Outlining the Heart. G. Grote (Nauheim).—"Wie orientiren wir uns am besten ueber die wahren Herzgrenzen."
53 *Means of Combating Meteorism. A. Oppenheim (Berlin).—"Beitrag zur Bekämpfung des Meteorismus."
54 (Case Reports) Psammoma in Brain. Lunz.—Unusual Operation for Cataract. Hirschberg.

Muenchener Med. Wochenschrift, March 25.

55 Differences Between Fetal and Maternal Blood Serum and the Action of Normal Serum in Checking Agglutination and Precipitation. J. Halban (Vienna).
56 *Incising the Kidney in Acute Pyelonephritis with Miliary Abscesses. Wilms (Leipsic).—"Ueber Spaltung der Niere bei ak. Pyel. mit mil. Absz."
57 *Experimental Suprarenal Diabetes. L. Meizger (Frankfurt a. M.).
58 Albumin Preparations in Feeding the Sick. J. Hoppe (Uchtspringe).
59 *Intra-Ocular Galvano-Cauterization. A. Roscher (Breslau).
60 *Position of Homeopathy in respect to Modern Medicine. Kunkel (Würzburg).

Therapeutische Monatshefte (Berlin), March.

61 The Waves of Epidemics and Diphtheria Serum Treatment. O. Rosenbach (Berlin).—"Die Wellenbewegung der Seuchen und das Diphtherieserum."
62 Dionin in Affections of the Respiratory Organs. A. Scherer (Ruppertshain i. Th.).
63 *Treatment of Rheumatic Heart Affections. R. Bensen (Bad Eilsen).—"Zur Beh. der rheum. Herzaff."
64 Ichthargan in Treatment of Gonorrhea. E. Saalfeld (Berlin).—Ibid. B. Goldberg.

Therapie der Gegenwart (Berlin), February.

65 *Practical Application of Artificially Induced Hyperemia. A. Bier (Greifswald).—"Ueber prakt. Anwendung kunstlich erzeugter Hyperaemie."
66 *Myogenic Pseudo-Angina Pectoris. O. Rosenbach (Berlin).—"Ueber myog. Pseudostenocardie."
67 *Effective Treatment of Septic Endocarditis. K. F. Wenckebach (Gröningen).—"Eine wirksame Beh. der sept. End."
68 *Olive Oil in Treatment of Stenosis of Pylorus and Duodenum. P. Cohnheim (Berlin).—"Die Heilwirkung grosser Dosen von Olivenöl bei org. und spast. Pylorus- und Duodenalstenosen und deren Folgezuständen."

March.

69 *Pain. C. L. Schleich.—"Ueber den Schmerz."
70 Physiologic Dosage of Digitalis. A. Fraenkel (Heidelberg).
71 *Treatment of Laryngeal Tuberculosis. E. v. Tovolgyi (Budapest).—"Ueber die Beh. der Kehlkopftub. mit Rücksicht auf die neueren Heilmittel."
72 Vulvo-Vaginitis Infantum. A. Buschke.
73 Treatment and Care of Consumptives; Collective Review. F. Klemperer.
74 A Death After Antitoxin Treatment of Tetanus. H. di Gaspero (Graz).

Hospitalstidende (Copenhagen), February 19 to March 19.

75 Omodynia and Its Pathogenesis. F. Sadolin.
76 *Bilateral Total Paralysis of the Recurrent Nerve. H. Mygind.
77 Points in Hygienic and Dietetic Therapeutics. C. Jurgensen.—"Nogle Fragmenter til den hyg. saerligt den diet. Ter. Praxis.
78 X-Rays in Diagnosis of Stones in Kidney or Urinary Passages. J. Mygge.—"Roentg. Anvendelse til Paavisning af Sten i Nyr. og i Urinlederne."
79 *Method of Sterilizing Catgut. M. Claudius.—"En Metode til Ster. af Katgut."

Wiener Klin. Rundschau, March 23.

80 Plague on an Austrian Steamer. A. Strauch.—"Die Pestfälle a. d. Ost. Dampfer Gundulic."
81 *Bacteriologic Tests of Current Disinfectants for the Mouth. J. Pelnar (Prague).—"Bact. Vers. ueber die Wirkung unserer Mundwässer."
82 *Relations Between Obesity and Glycosuria. Kalinczuk (Marienbad).—"Ueber gewisse Beziehungen zwischen Adiposität und Glycosurie."

Wiener Klin. Wochenschrift, March 27.

83 *Operative Treatment of Rhinophyma. P. Rusch (Innsbruck).
84 Action of Bactericidal Immune Sera. F. Wechsberg (Vienna).
85 Case of Repeated Extra-Uterine Pregnancy. W. Philipowicz.
86 Automatic Syringe. S. Spiegel.

Janus (Amsterdam), March.

87 *Antiquity of the Bubonic Plague. W. Ebstein (Göttingen).

Memorabilien (Heilbronn), xliv, 5.

88 *Cause and Treatment of Phlyctenular Conjunctivitis. R. Hilbert (Semburg).—"Aet. und Ther. der phlyc. Bindehaut-Entzündung."
89 Hygiene and Dietetics of the Stomach. Schilling (Leipsic).—"Hyg. und Diaet. des Magens."
90 Adenoid Vegetations. V. Rimscha (Riga).—"Ueber ad. Veg."

Giornale della Accad. di Med. (Turin), February.

91 Influence of the Central Nervous System on the Organic Transformations. O. Modica.
92 *Analysis of the Urine in Determining the Age of Neonatorum. O. Modica.
93 Study of the Urine in Measles. F. Nicola (Turin).—"Sulla glicocianina e glicocianidina e sulla ptomaina delle urine dei morbillosi."
94 *Nature of Blood Serum. E. Buffa (Turin).
95 *Phototherapy of Ozena. I. Dionisio.
96 *Alteration of Cutaneous Sensibility in Case of Visceral Lesions. E. Tedeschi (Turin).
97 New Model of Ophthalmotonometer. M. de Cristofaro.
98 Effect of Heated and Moist Air on the Respiratory Interchanges. V. Grandis (Buenos Ayres).

Rivista di Pat. Nerv. e Ment. (Florence), February.

99 *The Nerves of Taste. G. Fasola.—"Contributo clin. alla conoscenza dell' innervazione gust."
100 *Infantilism from Pellagra. C. Agostini (Perugia).—"Infantilismo distrofico e infantilismo mixoedematoso da eredopellagra."
101 Traumatic Astasia-Abasia in Epileptic Child. U. Gabbi (Messina).

Lo Sperimentale (Florence), lvi, 1, 1902.

102 *Study of Alimentary Infection. G. Galeotti (Florence).
103 *Experimental Research on Intestinal Peristalsis. G. Fasola.
104 Cadaveric Fauna. C. Biondi.
105 Digestion of Caseinogen. G. Rotondi.
106 Study of Formation of Corpse-Fat. L. Borri (Modena).—"Contributo alla conoscenza del processo di saponificazione dei cadaveri."

107 **Diffusion of Proteolytic Enzymes in Animal Kingdom.** C. Fermi (Sassari).
108 **Influence of Heating and Food on the Rapidity of the Heart Beat in Fasting Animals.** A. Pugliese (Bologna).
109 **Biologic Study of Vanadium.** R. Luzzatto (Sassari).

Cronica Med. Mexicana (Mexico), March 1.

110 *Treatment of Tuberculosis with Sulphid of Allyl. L. F. Guerra. (Oaxaca).—"Trat. de la tub. por el sulfuro de allia."
111 *Treatment of Convulsions. E. P. Lamicq.—"Las enfermedades convulsivas."

Hygiea (Stockholm), January to March.

112 **Practical Non-Toxicity of Phosphorus Sesquisulphid.** C. G. Santesson.—"Ar fosforsesksvisulfid giftig?"
113 **Suggestions for Collective Inquiry in Regard to Cancer in Sweden.** A. E. Ekblom.
114 **Surgery of Liver.** G. Naumann.—"Lefverkirurgi."
115 **Bubonic Plague at the Cape in 1901.** E. Levin.
116 **Koplik's Spots in Measles.** I. Wickman.—"Om de Koplikska fleckarna vid messling."
117 **Prophylaxis of Venereal Diseases.** P. J. Wising and others.
118 **Importance of Hyperplastic and Tubercular Processes in Pharyngeal Tonsils.** B. Floderus.—"Om betydelsen af hyp. och tub. processer i farynxtonsillen."
119 **Venereal Disease as Cause of Blindness.** V. J. Widmark.—"Om de ven. sjukd. betydelse som orsak till blindhet."
120 **Structure of Archiplasma of Tumor Cells.** N. Sjöbring.—"Om arkiplasmats struktur i svulstceller."
121 **Micro-organisms of Vaccine.** Ibid.—"Vaccinans mikroorganism."
122 **Principles for Treatment of Leg Ulcer.** J. A. Hedlund.

Tiddsskrift f. d. N. Laege f. (Christiania), February 15 to March 15.

123 *Absorption of Iron. E. Poulsson.—"Bemerkninger om jernets resorption."
124 *Nitropropiol or Indigo Test of Sugar in Urine. J. Thesen.—"Om Hoppe Seylers indigoreaktion til paavisning af sukker i urinen.

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1. **Death from Chloroform.**—The lack of a satisfactory explanation of deaths in the early stage of chloroform anesthesia has incited the research here reported by Embley, who summarizes the different views that have been given and gives elaborate details of his method of experimentation. The present installment of the article includes only the effects on the heart isolated from the central nervous system. He finds, 1, that "chloroform has an immediate and progressively paralytic effect upon the heart muscle. There is no preliminary period of stimulation. There is no abrupt change in the rate of efficiency of the heart. 2. Heart muscle is very sensitive to the poisonous effect of chloroform—a tension of chloroform in blood corresponding to 0.8 per cent. chloroform vapor in the air inhaled kills the isolated mammalian heart in sixteen minutes. 3. In the administration of chloroform by inhalation to the intact animal, the vapor tension of chloroform in the blood only slowly reaches that of the inspired air."

2. **Agglutinins in the Blood.**—The following are the conclusions of the paper by Ruffer and Crendiropoulo: "1. The cultures of a microbe freed from that microbe by filtration, dialysis or centrifugalization have a distinct though feeble agglutinating effect on that particular microbe. The age of the culture and the constitution of the medium are important factors in determining the quantity of agglutinins present in such cultures. 2. The red blood corpuscles of non-immunized and immunized animals contain no trace of agglutinins. 3. On the other hand, the polynuclear leucocytes of non-immunized animals always possess an agglutinating power greater than, or more rarely equal to that of the serum. They may therefore be rightly considered as the producers, or at any rate the carriers of the agglutinins. 4. In immunized animals the specific agglutinins appear in the polynuclear leucocytes and are therefore probably formed in them. The quantity of agglutinins begin to increase 30 to 48 hours after the injection and goes on increasing up to the tenth day or thereabouts. They then pass into the serum, the agglutinating power of which increases correspondingly. 5. The formation of specific agglutinins in polynuclear leucocytes and in the serum is preceded and accompanied during the first three or four days after the inoculation of a given microbe by an increase of agglutinins for other microbes. This latter increase is of short duration and stops suddenly, whereas the increase of specific agglutinins persists for a much longer time."

3. **Biologic Test for the Blood.**—Nuttall makes a progress report of the reaction of serum of the blood in different species of animals. He has tested some 46 bloods of apes and monkeys by means of the "antihuman" serum, the results being in accord with those previously published, that is, the bloods of the *simiidæ* give a precipitum apparently equal in quantity to that of human blood, the bloods of *cercopithecidæ* give less precipitum, while the least precipitum is given by the bloods of *hapalida* and *cebidæ*. The "antihorse" serum has been tested with negative results in 409 bloods, only the bloods of the horse and donkey reacting. "Antidog" serum has given precipitum with bloods of eight species of *canidæ*, but not with other bloods. The "antiox" and "antisheep" serums continue to give reactions the same as those of the other reports, that is, they act upon the bloods of other true ruminants and to a greater degree upon the bloods of more closely allied species. One of two "antipig" serums proved to be specially powerful, producing a marked clouding in a number of other mammals' bloods, including man, special species of monkeys, bear, dogs, raccoon, cat, coati, genet, stoat, rat, mouse, antelope and deer. A faint clouding was also noticed in bats and certain species of edentates and marsupials. This seems apparently to contradict the relatively specific character of these antiserums, but Nuttall remarks that this is not the case. He finds that a powerful antiserum for any mammalian blood will produce a varying amount of clouding in all mammalian bloods. This he calls the mammalian reaction. These slight reactions would never be mistaken for a full reaction, such as a homologous blood gives. "Antifowl" and "antiostrich" serums are found to act to a greater or less degree on all bird bloods, but not on other forms of bloods, and somewhat similar results are obtained with reptile serum. He describes in detail the method of measuring the degree of reaction, for which the reader will have to be referred to the original and illustrations. He is inclined to believe that with care we shall be able to measure species with this method and find out determinable degrees of blood-relationship which can be formulated.

4. **Leucocytosis and Blood Changes.**—The conclusions of Rogers' article are summed up as follows: "The percentage of the different forms of leucocytosis counted in a stained blood film is of great diagnostic value in differentiating typhoid and malarial remittent fevers, and is easily ascertained. 2. An increase of the lymphocytes to 40 per cent. or over, without any increase in the large mononuclears to about 12 per cent. and upwards, especially during the remissions of the temperature, strongly indicates malaria as against typhoid fever. This change is of great value when parasites are absent from the blood. 4. The presence of myelocytes in any number, such as from 1 to 5 per cent., points to malaria as against typhoid fever. 5. A high degree of anemia, such as a reduction of the red corpuscles to below 3,000,000 per c. mm., is much more frequently met in malarial than in typhoid fever. 6. A very great reduction in the total leucocyte count, such as to below 2000 per c. mm., is much more frequently met with in malarial than in typhoid fever, while the proportion of white or red corpuscles in malaria is not frequently less than 1 to 2000, which is rare in typhoid fever. 7. Leucocytosis can be detected by the presence of a great excess of white corpuscles, upwards of 80 per cent. of which are polynuclears, in a stained blood film, and is often of service in excluding malaria in intermittent fever due to liver abscess or other local inflammation."

5. **Filariasis.**—Gulland has investigated the blood in one case of filariasis and finds a marked leucocytosis and eosinophilia, which he thinks is bringing filariasis into line with other parasitic affections, such as trichiniasis, which have been known to be accompanied with an extreme degree of eosinophilia. It has been found by Cabot and Brown that extreme filariasis may be present in trichiniasis, etc., which he says seems to show that eosinophilia is concerned in protecting the body from parasitic toxins, whether these are absorbed from the intestines or are actually elaborated in the blood. That the other varieties of leucocytosis have also to do with this would seem to be indicated by the general leucocytosis occurring in his case with the increase of filariasis, but observations are wanting in regard to other parasites.

V 19

7. **Pulmonary Phthisis.**—The second Lumleian lecture by Roberts sums up the morbid conditions in the air passages, lungs, pleura, pleural cavity, mediastinal structures, thoracic walls and diaphragm. He sums up the chief practical effects of the various lesions met as follows: "1. There is temporary interference with the action and functions of the respiratory organs, by consolidation and associated changes, or by pleural effusion, which afterwards clears up. These may occur at an early period or during the course of a case and for the time being are often serious. The heart may also be more or less disturbed in its action by such conditions. 2. There is absolute destruction and consequent uselessness, either of a limited area or of extensive tracts, of the pulmonary tissues, thus permanently impairing in various degrees the respiratory function. Even when the phthisical process is arrested after cavities have formed, and the fibrosis has taken place, the involved portion of the lung can be of no further service, though other parts of the organ may take on compensatory work. 3. Morbid products of different kinds are formed, often purulent and of a wasting or exhausting nature and usually discharged as expectoration. Any kind of pleural effusion which has to be removed again and again, as well as empyema, also deserves mention under this head. 4. There is formation and absorption of toxins or other deleterious products—associated with tubercle bacilli, tubercle and its changes, pneumonia, suppuration, etc. It is to these agents that the pronounced general and remote effects of thoracic phthisis appear to be mainly due; no doubt this is a most important pathologic aspect of the disease. 5. Physical embarrassments of different kinds occur, the morbid conditions producing them not being in themselves of an active or serious nature, but being often of much consequence from this point of view, as exemplified by fibrotic changes, extensive pleural adhesions, pericardial adhesions, rigidity of the chest-wall and great muscular wasting. These conditions often materially interfere with breathing power as well as with the acts of coughing and expectoration. They may also embarrass the heart, obstruct the venous circulation, or interfere with particular veins, tubes or nerves. 6. There occur accidental lesions, usually grave in themselves, especially hemorrhage and pneumothorax, for which certain phthisical lesions afford highly favorable conditions. In not a few instances the pathologic effects just indicated are more or less combined in the same case of thoracic phthisis. *Remote morbid conditions.*—In these lectures I am only immediately concerned with the pathologic changes and conditions which are associated with the chest in cases of thoracic phthisis. It must never be forgotten, however, that in this disease other structures are often—indeed, it may be said usually—affected and contribute more or less to its clinical manifestations. Without entering into any discussion it must suffice to state that these remote lesions are either of a tuberculous nature, are well-known secondary non-tuberculous results of phthisis, or belong to the category of accidental or independent complications or complaints."

8. **Typhoid Fever.**—The second of the Milroy lectures reviews the etiology of typhoid, giving numerous illustrative cases showing the effects of water-borne infections.

9. **Vaccination.**—The summary of vaccination results given by Sinigar emphasizes, he thinks, the innocuousness of aseptic vaccination and shows that vaccination is a better protection against smallpox than smallpox is against vaccination. While a staphylococcus was found in the lymph used he points out that in spite of this the majority of arms showed only normal reactions of vaccinia. It is unsatisfactory to note that there are worthless lymphs on the market as it is a source of grave danger to public health and to the reputation of vaccination.

11. **Scarlet Fever.**—Millard argues against the infectivity of desquamation in scarlet fever. He sent out a number of letters to hospital authorities and practitioners and has received a large proportion of answers. The great majority of these admit that they can give little evidence that desquamating epithelium is, per se, a source of infection and that the patient may continue to desquamate for some time after he has ceased to be infectious. Of those who still believe in the infectivity of scarlatina one or two are a little dubious on the point and can almost be counted on the other side. He sums up the arguments against the supposition that desquamation is infectious, as follows: "1. The absence of evidence supporting it. It is difficult to believe but that, if the old supposition were correct, strong evidence of it would ere this have been forthcoming, as is now the case with discharges from the nose and ears. 2. The fact that infectivity begins prior to the onset of desquamation and frequently continues long after desquamation has ceased. 3. The fact that scarlet fever wards, although abounding in desquamating epithelium, are not a danger to neighboring houses. 4. The fact that the proportion of "return cases" does not appear to be increased among patients sent out from hospital still desquamating. On the other hand, the principal argument in favor of the view that desquamation is infectious is the fact that patients still desquamating, but otherwise apparently free from infection, have frequently been known to convey the disease to others. The whole force of this argument disappears, however, when we consider that patients apparently quite free from infection and in whom desquamation has entirely ceased have also been known to convey the disease; moreover, patients still desquamating have frequently mixed freely with others without untoward results."

12. **Mucin.**—Stuart-Low has utilized mucin as a bactericidal and emollient application in certain cases of aural and nasal disorders, starting with the idea apparently of replacing by something similar to the suppressed natural secretion the arid conditions that often exist in these cases. He has had distinctly encouraging results.

13. **Malaria.**—Birdwood suggests a number of sanitary provisions to be employed in malarial settlements: Among them are a crusade against the obvious anopheles breeding pools and better drainage, providing, for example, smaller drains with cement or stone to prevent stagnant points where anopheles can breed, and using similar preventives in irrigation ditches. There are also many non-obvious localities where anopheles breed which should be looked after. Unsanitary crowding of natives in malarial portions of the tropics is important and especially of servants of Europeans, and he would also provide gauze doors and windows for the barracks of European troops and advise fumigation of rooms and houses. Quininizing the community as advocated by Koch is impossible, of course, in crowded districts, but he thinks quinin should be used more freely. Instructions should be given as regards the cause of malaria and every medical man should be able to make blood films and prepare specimens. Of course, the impossibility of quininizing a whole community, the presence of rice fields, the abundance of anopheles pools are serious matters, but they need not be discouraging.

18. **Plague.**—White reports a case of bubonic plague with a rather peculiar course. A sailor on a line steamer became ill 15 days after leaving Capetown with fever, and swelling in the left inguinal region. He attributed his trouble to a strain received in wrestling. He had a continued temperature, the bubo suppurated and the pus burrowed along the flank. Plague was not suspected and the ship was given pratique. The man was sent to the general hospital at Southampton, where his case was suspected, he was sent to the floating plague hospital for safety, and examinations were made and the bacillus pestis found. The case is one that abused all the ethics of the disease. The man was fifteen days out when he became ill. The bubo suppurated for about ten days, and when the man was almost convalescent from plague the bacillus pestis was found in the profuse discharge.

29. **Intervention in Deformed Pelvis.**—Bar disapproves of induction of premature labor when the pelvis is less than 80 mm. in diameter, and rejects it even with a pelvis of 80 to 85 mm. But he regards it as a good operation with a diameter of 86 to 90 mm., and excellent both in the immediate and the remote results when the pelvis is over 90 mm. The fetus is usually well developed when the diameter is more than 85 mm. and the infants soon compare favorably with the normal standard. Cesarean section and symphysiotomy are still very seri-

ous operations and premature delivery is much to be preferred in case of a pelvis of this size. The mortality of the children is no greater than in deliveries at term. Cesarean section offers prospect of success only when done at the commencement of labor, when the patient is neither prostrated nor infected. Disregard of these indispensable conditions has rendered the statistics more unfavorable than the facts deserve. The same applies also to symphysiotomy, which should never be attempted if there is a chance that the patient is already infected. If she is much prostrated, has temperature and a fetid discharge, both of these operations are contra-indicated and the vitality of the child is already compromised, consequently embryotomy should be preferred. Even in cases in which the mother does not seem to be infected, if the fetal heart beat is indistinct and irregular and the discharge is stained with meconium, there is every probability that the child is no longer viable and embryotomy should be preferred to the dangers of section or symphysiotomy. The latter operation is liable to be followed by prolapse of the uterus, urinary disturbances, with or without laceration of the urethra, and even permanent separation of the pubes. Bar has performed the operation on 25 women. All were sound and the children were healthy. There was no mortality, but serious tardy troubles occurred in a number. Bar adds that 6000 women still die every year of puerperal infection in France, by far the largest majority in the country and small towns. The multiplication of lying-in hospitals where the major operations can be undertaken at need will reduce the mortality from this cause and also the number of necessary feticidal interventions.

30. **Utilization of the Extra-Embryonal Part of the Ovum.**—Bouchacourt has been studying for years the natural utilization of the extra-embryonal part of the ovum in various animal species. He thinks that placentophagia is a natural instinct, a kind of opotherapy, and traces its history through the ages as observed in animals and in various folk customs. After establishing on himself the absolute harmlessness of the ingestion of placentæ derived from the hospitals or from sheep, he administered the extract to 12 patients with deficient secretion of milk. The results indicate that placentophagia favors the establishment of the secretion, but is unable to induce it when the glands are much atrophied. He noticed that the placentæ of sheep had a decided laxative effect.

33. **Treatment of Neurasthenia.**—Romme accepts De Fleury's division of neurasthenia into the two classes, with arterial hypertension and with hypotension. The subjects of the first group have an intoxicated nervous system. Their entire organism is loaded with the refuse of interstitial nutrition. The heart is exhausted and has become hypertrophied in the effort to overcome the resistance in the peripheral vessels. The stomach is hyperpeptic. The great indication is to clean out the organism, the blood and the tissues. A milk diet will afford great relief in a few days. The milk should be given at first about seven times a day, mixed with one-third of some alkaline water. Massage, hot douches and static baths will be found useful, possibly supplemented by exercise, steam baths and pilocarpin to stimulate the functions of the skin. If the stomach proves rebellious, 50 to 100 gm. of artificial serum may be injected subcutaneously every day or alternate day. In both these groups the meals should be taken without a beverage of any kind. In the neurasthenia with hypotension the indications are to augment the strength. Four light meals should be taken, and repose should be enforced instead of exercise. The patients sleep better at night after a nap during the day. Among the tonic measures recommended are salt and sulphur baths, cold or hot douches, deep massage, inhalations of oxygen, ozone and compressed air. But the tonic par excellence is the subcutaneous injection of small amounts of a saline solution increasing from 1 or 2 gm. at first to 4 or 10 gm. He prefers the formula: 1 gm. each of sodium sulphate, sodium chlorid and sodium phosphate in 100 gm. of water, with 50 cg. of phenic acid. These injections are particularly beneficial in amyasthenia, genital asthenia with hyposecretion and in cases of a tendency to torpor, fear or melancholy.

42. **Operating in the First Stage of Ether Anesthesia.**—Sudeck's experiences with operations undertaken during the analgesia that occurs after the first few whiffs of ether, have been confirmed by Teweles and by his own further experience. The condition that follows the first few whiffs is a sort of tipsiness like that following the drinking of alcohol. The subjects still retain their consciousness, but are more or less affected and the sensation of pain is entirely abolished. Sudeck states that it is possible to perform all brief operations in this stage. It has none of the dangers nor inconveniences of profound narcosis and is fully as effective. The patients may resist and scream, but they state afterward that they experienced no pain. He announces that this method is indicated for all operations in which absolute quiet and complete relaxation of the muscles are not indispensable. There is no danger of syncope and the patients are ready for dinner with their usual appetite. In case of failure from any cause the operation can be concluded under general narcosis. Kronacher has recently advocated the cutting short of the ether narcosis, arresting it abruptly at the beginning of the phase of agitation, and announces that the anesthesia thus obtained is ample for the majority of operations. He commences to operate at the stage in which Sudeck is completing his operation. Teweles uses ether from flasks holding only 10 c.c. He administers 30 or 40 c.c. at first and then keeps the patient under its influence with an additional 10 c.c. from time to time as needed. Sudeck now operates almost exclusively under the "ether Rausch" and found it perfectly satisfactory in resection of a callus of the median nerve requiring suture of the nerve, in arthrotomy of the shoulder joint for a tuberculous process, extirpation of a lymphoma on the neck, an arthrotomy requiring thirty minutes, tendoplasty, etc. During these long operations the patient sometimes becomes restless, but in the briefer interventions the operation proceeds without disturbance in most cases. The patients who are most excited before the intervention are the most difficult subjects to operate on and the surgeon should aim to tranquillize them beforehand as far as possible.

43. **Round Ulcer of the Duodenum.**—Laspeyres states that the records show that a large proportion of ulcers of the duodenum cause no symptoms until perforation occurs or hemorrhage. Oppenheimer reports 24 of such cases and Perry and Shaw 91 out of 151. When pain occurs, Boas has noticed that it develops several hours after eating and is located mostly in the right hypochondrium, about 2 cm. below the gall-bladder. In other cases the pains commence earlier, sometimes in a half hour after eating. Occasionally the pain is increased by reclining on the right side, and unlike gastric ulcer, it is not relieved by vomiting. Collin has described a paroxysmal dyspnea simulating pericarditis, observed in one case. The reflex complications of ulcer of the duodenum may be neuralgias, palpitations, shortness of breath, etc. Boas mentions that there is no parallelism between the character of the food and the pains. The latter may develop when the stomach is empty and last into the night, or commence after the patient has retired. Several have noticed that the pains which appeared about two hours after breakfast were banished by ingestion of a little wine and temporarily relieved by the same means after dinner. Boas ascribes this effect of the wine to the dilution of the food in the duodenum and thinks that any fluid would answer the same purpose. Milk and the white of egg bind the hydrochloric acid and might thus be even more beneficial than the wine. The pains are irregular, sudden and like colic at times. The painful region is also sensitive to pressure, but the condition and location varies from time to time and may prove misleading. Boas discovered in several cases a circumscribed tenderness to the right of the spine, close to the twelfth thoracic vertebra. Vomiting is a comparatively rare symptom and is not characteristic unless hemorrhagic. Oppenheimer found that it was noted in only 17 out of 100 cases. It usually occurs at the height of the paroxysm of pain and seems to have no connection with the fulness or emptiness of the stomach. Pagenstecher therefore attributes

it to reflex action, a manifestation of spasmodic contraction or possibly of peritoneal irritation as in the so-called gallstone colic. In 18 cases on record laparotomy was performed on account of acute, general peritonitis, but the operator failed to trace the inflammation to its true source in the duodenal ulcer and all the patients died. The published statistics indicate that 25 to 33 per cent. of all operated cases of ulcer in the stomach or duodenum have been saved. The mortality was only 39 per cent. of the cases operated within twelve hours of the perforation. There are only 3 cases on record in which the ulcer was diagnosed and gastro-enterostomy done before perforation occurred. All of these patients were practically cured and have had no troubles since, for more than five years in one case. One of the patients died of tuberculosis later and the ulcer was found well cicatrized. But there is always the liability that the gastric juice will come in contact with the ulcer after the gastro-enterostomy, and it is still a question whether this operation offers better prospects on the whole than internal treatment.

44. **Treatment of Acute Infectious Diseases with Specific Serum from Convalescents.**—Walger has been continuing his researches in this line and states that he will soon have important results to announce. For the present, he describes the mechanism of the action of these specific sera. The exanthem or infiltration of the lung, etc., in acute infectious diseases are merely the efforts of the organism to eliminate the toxins and the toxin-producers. The production of the toxins raises the temperature by the chemical processes involved. Another factor in the elevation of the temperature is the efforts of the organism to accomplish the chemical transformation of the toxins into harmless substances and then eliminate them in the secretions and excretions. The stimulus to this transformation process is supplied by the micro-organisms themselves. As soon as the toxins have undergone this transformation, the further activity of the micro-organisms is checked. No further toxin is elaborated and the disease process comes to an end. This can be artificially accomplished by injecting the already transformed toxins from another organism which has passed through the various phases of the disease reaction and reached the final phase of transformed toxins and consequent arrest of the morbid activity of the disease germs. The specific serum thus injected arrests the activity of the disease germs in the same way as if the serum had been elaborated in the organism into which it has been injected. But it does not confer subsequent immunity like the latter process. The subject is cured of his disease, but is not henceforth immune as if the recovery had been natural. He is liable to contract measles, for example, as if he had never had the disease.

45. **Differentiation of Cystitis and Pyelitis.**—Rosenfeld states that differentiation is possible by the reaction of the urine, the shape of the corpuscles in the urine, and by the proportions between the pus and albumin. The urine is acid in uncomplicated pyelitis. It may even remain acid in acid cystitis as in tuberculosis or urates. The white corpuscles are round when they are derived directly from the blood, but when they come from the renal pelvis they have an irregular, ameboid outline. The reds are also degenerated when they come from the kidney, while they are well preserved when derived directly from the bladder. In cystitis the amount of albumin is never more than .1 to .15 per cent. The proportion is much larger in case of pyelitis. With an inch of pus in a liter glass the average proportion of albumin in case of cystitis is .1; in pyelitis .3. With .5 cm. of pus, in cystitis, .06; in pyelitis, .2. With only 1 to 2 mm. of pus, in cystitis traces; in pyelitis .1. In the case of a patient recently observed the urine was acid, the whites ameboid, the reds degenerated and the albumin was in the proportion of .175 per cent.

47. **Curative Effect of Anesthetics.**—Spiess noted that inflammatory processes healed with striking rapidity when the subjects had been submitted to anesthesia for any cause. He therefore has been studying for years the connection between the anesthesia and the curative action which he has never missed in all his tests. He thinks that the effect is due to a reflex action of the anesthetic on the vasomotor nerves, inducing changes in the circulation of the inflamed parts.

51. **Technic of Examining the Pupil.**—Schirmer deplores the usual lack of uniformity in the examination of the pupil reflexes by the general practitioner, which renders comparison impossible. He has established that the diameter of the pupil is always the same in the maximal adapted eye with light of 100 to 1100 candle power. Tange asserted in his thesis at Amsterdam last year, based on the measurement of 1000 pupils, that the physiologic diameter of the pupil is between 2 and 4 mm., but in the overwhelming majority it is between 2.5 and 3 mm. Schirmer points out the disturbing influence of passing clouds on the light that reaches the eye in examination at a window. He also states that the adaptation of the eye is unable to follow the diminishing light in approaching twilight; hence examination at this time is unreliable, even although the light may still be more than 100 candle power. He announces that we can assume some disturbance in the centrifugal fibers on one side when the pupils are of unequal diameter when both eyes are illuminated, and also when the pupil of one eye, tested alone, reacts more sluggishly to the light than the other pupil, with either direct or indirect stimulation. We can assume a unilateral lesion of the centripetal fibers, 1, when the light reaction of both pupils is extremely feeble in response to stimulus from that side, while stimulus applied to the other eye induces the normal light reflex; 2, in the cases in which the physiologic diameter of the pupil is abnormal, that is, more than 4 or less than 2 mm.; 3, when the pupil is physiologically wider on this side than on the other. This larger size of the pupil is sometimes the only sign of some anomaly in the centripetal fibers, at a time when the modification in the pupil reflex is still too slight to be perceptible. The pupil reflex is always more sluggish in the elderly than in youth. Schirmer examines both pupils first at 1 m. from a light window for inequality. He then covers one eye and has the subject fix on an object in the distance. After allowing two or three minutes for convergence, accommodation and adaptation, he applies the scale without shading the eye with his head. The other eye is then examined in the same way. This examination of one eye at a time reveals disturbances in the centripetal part of the reflex system impossible to determine in any other way. In one case, for instance, he found the pupil on one side 3.25 mm. and on the other 6 mm., while with both eyes open the pupils were always 3.5 mm. The case proved to be one of unilateral papillitic atrophy. The reflex excitability is then tested on each eye separately. The diagram for each subject mentions: 1, the pupil diameter with both eyes open; 2, of each eye separately, and 3, the direct and consensual reaction of each. He considers other details superfluous in general practice.

53. **Means of Combating Meteorism.**—Oppenheim suggests a means of preventing heart failure in cases of ileus or peritonitis, which he deduces from his experimental researches. The intestines and stomach of animals were inflated by blowing air into the rectum. The diaphragm was forced up and the heart action was fatally interfered with in many instances. In some of the animals he evacuated the air by puncture and administered physostigmin. The results confirmed the experience of veterinarians that this drug is a powerful and certain means of inducing peristalsis. The action is uneven and a large dose may entail torsion of the intestine on its axis or even rupture. The unstriped muscles of the bronchi also experience the specific effect of the drug; this may arrest the respiration when the lungs are compressed by the forcing up of the diaphragm. Froehner has recently published the contraindications for physostigmin in veterinary practice. He says in regard to atropin that the effect is more marked in proportion as the brain of the animal is developed. Young animals bear it much better than older ones. Intestinal peristalsis is promoted by small doses of atropin, which evidently paralyze the splanchnic nerves that inhibit the movements of the intestines. Larger doses paralyze the intestines and induce tympanitis and obstruction. Atropin is rapidly eliminated, but physostigmin has a cumulative action. The former coun-

teracts to a certain degree the effect of the latter. Oppenheim urges further study of this subject as he fears that we are entering upon a period in which the time is wasted on such measures until the ileus or peritonitis may pass the point when the patient might have been saved. His experiments indicate that physostigmin should be suspended when the meteorism has lasted a certain length of time. It has no action on muscles stretched to the point of atony. In his experiments, therefore, he did not inject it until the intestines had been punctured and the distension relieved. He suggests that this technic might be tried as a last resource in desperate cases in order to prevent mechanical heart failure from the upward pressure of the diaphragm.

56. **Incising the Kidney in Acute Pyelonephritis with Miliary Abscesses.**—Wilms relates a case in which the patient was restored to perfect health by slitting the kidney in the course of an acute urethritis, cystitis and ascending pyelonephritis. In order to have as little hemorrhage as possible, the kidney was not cut open as recommended by some, but a small incision was made in the middle and the two halves were then separated by the fingers and a blunt instrument. The kidney was thus slit with the minimum use of the knife and the hemorrhage was trifling. An inflamed kidney can be split in this way much more easily than a sound organ. All of the accessible abscesses were evacuated and the pelvis drained, the gauze drains left inside the kidney as well as around it. Temperature was permanently normal after two weeks. The drains were gradually removed in the course of three weeks and the fistula had healed by the end of the eighth week. The success in this case of small disseminated abscesses shows that suppurative infiltration is curable by this measure. The failures reported by some writers are possibly due to the fact that they sutured the kidney immediately afterward. Free drainage seems to be indispensable.

57. **Suprarenal Diabetes.**—In Metzger's experiments injection of suprarenal extract induced hyperglycohemia in dogs and rabbits. Whether the action was by the mediation of the pancreas or of the liver, is still undetermined, but indications point to the latter. The injected substance seems to act on the pancreas and inhibit the functioning of the cells of the organ. The largest proportion of sugar was observed in rabbits injected immediately after both kidneys had been ablated.

59. **Intra-Ocular Galvano-Cauterization.**—Roscher announces that this method of treating infected wounds and panophthalmitis deserves more general adoption. It was first proposed and successfully performed by Van Millingen at Constantinople. He reported preservation of the sight and arrest of the process in three cases of incipient panophthalmitis. The edges of the wound were cauterized in narcosis and the wire loop was introduced through the wound in the sclerotic into the vitreous body and was then twisted around, bringing it into contact with the entire length of the wound and all the injured tissues. The current can be turned on before or after it is inserted. The operation was complete in three or four seconds, and the instrument was introduced to a depth of 4 to 8 mm. The conjunctiva was then sutured over the hole in the sclerotic, atropin instilled and the eye dressed. The injury of the sclerotic in each case had been followed by severe infection, intense pain, edema of the lids, chemosis and hypopion. All recovered after this single intervention, with vision of 3/6, 6/6 and 5/25. Roscher describes another case of injury of the sclerotic from which protruded a plug of purulent vitreous humor. The plug was pulled out and cut off, the cold loop introduced and the vitreous body and edges of the wound thoroughly cauterized. Narcosis was not induced and the conjunctiva was not sutured. The eye healed perfectly in a short time and vision has remained at 5/5 during the six months since. Eversbusch found the operation equally effective in a case of post-operative infection. Three similar cases have been reported by Bäumler and Van Millingen and Roscher adds another. He also describes two hopelessly doomed cases in which he attributes the preservation of a good shaped stump to the arrest of the infection by intra-ocular galvano-cauterization.

60. **Position of Homeopathy in Modern Medicine.**—Petitions have been presented to the authorities in some of the German states asking for the establishment of a chair of homeopathy in the medical colleges. Kunkel defines the present status of homeopathy and affirms that it would be "the worst of crimes, sinning against truth," to lead youth into such paths. He adds that not one of the innumerable achievements and forms of progress in scientific and practical medicine have ever been the work of a homeopath. The general public health in Germany is on a higher level now than at any other period in history, but the homeopaths have not contributed the slightest share in this progress, based on the study of the causes of disease. He points out that the minute doses of homeopathy never induce any reaction in frogs or rabbits, and that the result of their administration in man must be accepted as the effect of suggestion, never as that of the medication.

63. **Treatment of Rheumatic Heart Affections.**—Bensen calls attention to the remarkable influence of the exhalations from natural sulphur waters on the heart action. The sulphuretted hydrogen gas retards the pulse and proves effective in treatment of heart affections consecutive to rheumatism. He found that the pulse was slower by four to ten beats in healthy persons after they had spent an hour or two in the inhaling rooms over the sulphur springs. He thinks that this course of inhalation treatment deserves a prominent place in the treatment of recent rheumatic heart affections and in cases of arrhythmia and the resulting disturbances. The gas has a certain bactericidal effect, but this can not explain the benefits derived in these cases. He is inclined to attribute it to a paralyzing action on the sympathetic or on the pulse-accelerating mechanism of the heart. He reports twenty cases thus treated and all completely cured in the course of six weeks. In certain cases he supplemented the inhalations by sulphur baths two or three times a week. He ascribes the infection of the heart in many cases to the penetration of disease germs directly from the air passages, and urges the necessity of thorough rinsing of the mouth with disinfectants and gargling in every case of follicular sore throat.

65. **Practical Application of Artificially Induced Hyperemia.**—Bier details the technique of artificially inducing hyperemia, both the active by heated air and the passive congestion by constricting bandages. He urges the use of simple apparatus for the hot-air treatment, such as can be obtained by every practitioner—an ordinary box, coated with soluble glass inside and out, a lamp and flaring elbow pipe entering the box. The passive congestion promotes the formation of bone and connective tissue. It is bactericidal and arrests or attenuates pain in a most remarkable manner. It has also a dissolving action, but there is no re-absorption while it lasts, and consequently it must be followed by massage in deforming joint affections, persisting extravasations, etc. He applies the constriction in such cases for eight to ten hours. This is followed by massage and the limb is then raised for an hour or two. Similar and even more powerful results can be obtained by a modification of Junod's boot—a metal cylinder with rubber airtight curtains at each end. It is put on over the joint and the air is aspirated until the subject experiences pain. The air is then allowed to re-enter and is again aspirated to the limit of endurance, every five minutes for twenty minutes a day. The congestion induced by this means is much more effective than by constriction alone. He has found the dissolving action of the artificially induced hyperemia, both active and passive, remarkably effective in curing morbid deposits and adhesions. Some of his patients of this class have been under treatment for four years. The benefits of the passive congestion are most strikingly apparent in painful tuberculous joint affections. He usually applies it as long as improvement is manifest, then alternates it with immobilization and local injections. The hyperemia induced by constriction must stop short of causing pain. The congested part must be warm, a bluish red and edematous. Cold congestion is injurious. The application should be made intermittently to allow the edema to subside before the hyperemia

is again induced. It has proved exceptionally valuable as a means of treating gonorrheal, pyemic and rheumatic joint affections. It is applied in these cases during the day, removed at night, and the limb elevated. All pus and effusions must be evacuated before the passive congestion is induced, the application and the elevation of the limb then alternating hour by hour. Bier reiterates emphatically that it is certainly the best means at our command for the treatment of gonorrheal joint affections. It has also attenuated and abbreviated the course of recent erysipelas in the 20 cases in which he has applied it. It is of course contra-indicated in all cases in which gangrene is threatened. Skilfully applied, it may abort a phlegmon. An elastic band around the neck induces passive congestion in the head, and he has by this means permanently cured a number of cases of chorea. Congestion can be induced on the trunk by a cupping and aspirating appliance on the same principle as above described. He has had ten years' experience with heated air as a measure to promote re-absorption in elephantiasis, chronic local edema, etc., and the results have been extremely satisfactory. Perhaps its most welcome effect is the relief of neuralgia and of pains in the joints. The heated air has a marked stimulating and gymnastic action on morbid blood vessels, varicose veins, etc. The antibacterial action is probably due to the heat. Deep-seated processes are frequently aggravated; active hyperemia is therefore contra-indicated in tubercular joint affections. After the application the patients are rubbed dry; they then put on dry clothes and rest in a warm room for an hour.

66. **Myogenic Pseudo-Angina Pectoris.**—Rosenbach describes four varieties of myogenic affections: myopathic migraine, a pseudo-pleural myogenic affection, myopathic cardialgia, gastralgia and myogenic asthma, besides the muscular pseudo-angina pectoris. The symptom-complex in the latter suggests true angina pectoris, but it is distinguished by the peculiar sensitiveness of the ensiform cartilage, the sternum and of certain portions of the intercostal, neck and shoulder muscles. Also by the fact that the patients feel most comfortable in the dorsal decubitus. The pulse is never accelerated nor retarded, and when the attack subsides the subjects are completely restored and can run, climb, etc., without disturbance. Massage is effective when the muscles involved are superficial. Diaphoretics are also useful. The induction current with large electrodes often proves effective. But the magic effect of the antirheumatic remedies, one-fourth to a gram of antipyrin or phenacetin, will differentiate the myogenic origin of the pains. Functional myopathy of the muscles of the abdomen or back is one of the most frequent and most often misunderstood causes of paroxysmal abdominal pains. They are usually ascribed to a stomach affection.

67. **Effective Treatment of Septic Endocarditis.**—Wenckebach proclaims that his experimental and clinical research and experiences have demonstrated that Credé's soluble silver has the property of hastening certain reactions in the organism which usually occur slowly and gradually. Under the influence of intravenous injections of a 1 or 2 per cent. solution of the silver they pass through all their phases with lightning rapidity. The bactericidal property of the blood is enormously increased. The silver is rapidly eliminated and hence the injections have to be frequently repeated. He was amazed at its efficacy in the cure of septic endocarditis in a lad of 15 and in a young woman, the only cases of the kind that have come under his observation since he began using the collargol.

68. **Olive Oil in Treatment of Stenosis of Pylorus or Duodenum.**—Cohnheim reports 11 cases of stenosis which he was on the point of referring to the surgeon as all internal treatment had failed, when olive oil was tried as a last resort. About 100 to 150 c.c. of warmed olive oil were taken in the morning before breakfast, after which the patients reclined on the right side for fifteen to twenty-five minutes and ate nothing for an hour. If the pains persisted an additional 50 c.c. were taken on retiring. After the first, one or two tablespoonfuls were taken a half-hour before meals. All the patients took the oil without repugnance and no inconveniences were observed in any case. No nausea nor diarrhea. They were all relieved from their discomfort and the stagnation and the cramp-like pains were abolished. Some of the patients took 50 c.c. of the oil one hour before eating or it was introduced through a sound. The oil answers three purposes: it arrests the pains, obviates friction and serves also for nourishment. It has no action on purely nervous or hysteric stomach cramps and thus serves to differentiate them. This oil treatment renders surgical intervention unnecessary in many cases, even with pronounced gastrectasia. It is especially effectual in relieving stenosis not due to an organic obstacle. Cases of cicatricial stenosis of the pylorus or duodenum are relieved and have no further discomfort with observance of ordinary precautions. The oil in these cases acts mechanically by diminishing the frictional resistance. Cases of relative stenosis clinically manifested by continuous hypersecretion and spasm of the pylorus a few hours after the principal meals, are also materially improved or completely cured by the oil. It should be given a thorough trial in all cases before operating.

69. **New Principles for Combating Pain.**—Schleich compares the neuroglia and neurolemma to the insulating wrapper of an electric cable. When there is a defect in either, some of the current is lost, and in the case of the nerve, the escaping current and resulting short circuit is experienced as pain. If a point painful on pressure can be discovered along the course of a nerve trunk in a painful affection, the injection of some indifferent fluid, or better still, an anesthetic, will loosen the fibers of the insulator and by the edema it induces close the defect and restore the intact conductibility of the nerve. Jürgens has found that the injection of oil answered the purpose, but Schleich prefers his anesthetic mixture. The same end is attained by Bier's passive congestion and other measures which induce this therapeutic edemization of the insulating sheath. He therefore urgently advocates that when points very painful on pressure can be discovered along the course of a nerve trunk, an anesthetic solution should be injected. Pure neuralgia and the intercostal and trigeminal, also sciatica, occipital headache and peri-articular pains are promising affections for the application of this measure. Injection of any indifferent fluid may prove useful in the same manner in chronic inflamed tissue in which constricting processes include the nerve trunk or pull on it, and in cases of neuroma and peri-articular atrophic conditions. The hydraulic loosening of the fasciculi may release the nerve and cure the pain. In incipient inflammation cold applications are most useful in controlling pain on account of their contracting action on the vessels, thus diminishing the pressure on the tissues. But when the tissue is already loosened by the inflammation, warmth is more effective on account of the hyperemia induced. The relief experienced by rheumatic subjects in a hot bath is due to the hyperemia which augments the inhibiting function of the neuroglia. Local application of heat to the spine has a remarkable effect in the same way in relieving pain even at a distance, by the enhanced inhibiting function. Schleich has found that pain may be relieved when the patient lies on two long narrow bags of hot sand, one on each side of the spine. This induces local hyperemia of the spinal insulator, and consequent exaggerated inhibition. The same effect can be obtained by inhalation of an anesthetic. He reports twelve cases of violent biliary or renal colic relieved instantaneously by inhalation of his anesthetic mixture, not sufficient to induce narcosis, but merely to abolish pain while the consciousness is retained. The patient becomes drowsy as the pains subside and falls asleep for several hours. He has found this initial stage of anesthesia exceptionally effective in relieving severe rheumatic pains. He therefore recommends it unhesitatingly for all very painful affections as less dangerous than morphin and more certain in its effects. His mixture is a combination of 2 parts ethyl chlorid, 4 parts chloroform and 12 parts ether; the whole representing a boiling-point of 38 C. He states that there are now on record 10,000 profound narcoses obtained with it, and only one death has been reported, and in this fatal case his explicit directions in regard to the pupil signs had been disre-

garded by the operator. He ascribes the analgesic effect of the anesthetic to the vasomotor exaggeration of the inhibiting function by the hyperemia of the neuroglia of the posterior horns.

71. **Treatment of Laryngeal Tuberculosis.**—Tovolgyi has been making a special study of the new remedies advocated for the treatment of this affection. His experience tends to demonstrate that a combination of several is most effective: phenol sulfuricinum during the stage of diffuse infiltration and intense inflammation, orthoform oil to combat the dysphagia and lactic acid as the process is subsiding.

76. **Bilateral Total Paralysis of Recurrent Nerve.**—Mygind adds another to the sixteen cases of this condition published in the literature. In his patient the examination of the larynx revealed a hitherto unsuspected carcinomatous stricture of the esophagus. Cancer of the esophagus or thyroid was noted in eight of the other cases; sarcoma and struma in two others. Pericarditis, aneurysm of the aorta or diphtheria were mentioned in the others. There is only one case known in which the vocal cords regained their function.

79. **Method of Sterilizing Catgut.**—Claudius recommends the method of sterilizing and preserving catgut which has been thoroughly tested and is now currently used in Bloch's surgical service. Ordinary raw catgut is wound loosely on glass spools, two threads on a spool. The spool is then placed in a solution of one part iodin and one part potassium iodid in 100 parts water. The jar is labelled with the date, and in eight days the catgut is ready for use. It is kept in the iodin solution until wanted, when it is transferred to another vessel containing a carbolized solution. The length of thread desired is cut off under the surface of the solution and the spool is returned to the iodin solution. This iodized catgut is black, completely sterile, and has a peculiarly appropriate consistency, not mucilaginous nor sticky, but plastic, elastic, and it ties like a fine soft copper wire. He reports tests which demonstrate the perfect sterilization of the catgut and also the harmlessness of the iodin, which has the property of being a powerful antiseptic while it does not irritate the tissues. It seems to have the tendency to form a harmless combination with the organic fluids. Catgut left for five months in the iodin solution was as perfect in every respect as that freshly prepared. If left for twenty-four hours in the carbolized solution the iodin dissolves out and the catgut loses its peculiarly fine consistency and becomes like the catgut sterilized by ordinary methods.

81. **Bacteriologic Tests of Disinfectants for the Mouth.**—Pelnar's tests demonstrated that none of the widely advertised mouth washes are more bactericidal than ordinary water to which a little alcohol has been added. Gargling, even for ten minutes, with a 6 per cent. solution of "odol," etc., as directed, is utterly useless from a bacteriologic point of view. The microbes are not destroyed nor even checked in their growth. Even more concentrated solutions applied directly to cultures produced no effect in less than several hours.

82. **Relations Between Obesity and Glycosuria.**—Kalinczuk has observed a number of cases at Marienbad in which obese persons exhibited a glycosuria which disappeared as the weight was reduced to physiologic limits. He is inclined to attribute the glycosuria in these cases to fatty degeneration of the liver, as the restoration of the liver to normal was rapidly followed by the vanishing of the glycosuria. One or more courses of mineral waters reduced the obesity and banished the glycosuria in every case in his extensive experience at Marienbad. The alkaline saline waters answer several indications in these cases and are preferable to mere dieting of the obesity. The normal limits of fat for each individual can be determined by daily examination of the urine and the patients must repeat the course of mineral waters as often as needed to keep within these limits.

83. **Operative Treatment of Rhinophyma.**—Wedge excision and suture is only applicable in exceptional cases of this condition. Subcutaneous excision of the connective tissue is liable to result in necrosis of the flaps, but both of these methods of treatment have the advantage of rapid healing. Rusch prefers peeling off the outer layers and excrescences, leaving a foundation of skin tissue beneath, which soon heals over to restore the defect. In his cases the healing of the operated portion was accompanied by the disappearance of the acne elsewhere on the face. This may have been due to the relief of the congestion by the loss of blood during the intervention. There has been no recurrence in either case during the one and two years since. Transplantation of flaps is not necessary. The raw surfaces soon heal over.

87. **Antiquity of Bubonic Plague.**—Ebstein asserts that no reliable mention of the bubonic plague has been discovered in the medical lore of ancient India. The first description of it is found in the writings of the medical men of Alexandria, the famous Egyptian medical school, during the first century before Christ.

88. **Phlyctenular Conjunctivitis.**—Hilbert investigated 100 children affected with phlyctenular conjunctivitis and found swollen scrofulous glands in 73, scrofulous eruptions in 22, and rachitis and scrofula in 5. This association with scrofula can not be a mere coincidence, and he proclaims that treatment of the conjunctivitis should aim first to cure the scrofulous condition. He has found cod liver oil, iodin, baths, etc., the best general measures and supplements them by insufflation of calomel into the eye once a day. The eye is rinsed out several times a day with a tepid solution of boric acid. In case iodin is being taken internally, the calomel can not be used on account of the danger of the formation of sublimate. He therefore substitutes a salve of the yellow oxid of mercury in five parts of vaselin. Caustic remedies are distinctly injurious. Under this combined treatment the affection is cured in six to ten days.

91. **Influence of Central Nervous System on the Organic Transformations.**—In this communication from Lombroso's Institute of Legal Medicine and Psychiatry, Modica states that the removal of the frontal lobes in animals had a marked effect in diminishing the elimination of nitrogen and the total phosphates in the urine, while the earthy phosphates almost entirely disappeared. Further tests—removing or destroying portions of the occipital or parietal lobes—failed to demonstrate any influence of this kind on the organic transformations. He is now engaged in studying the changes in the metabolism after destroying separate portions of the brain by scalding with boiling water forced through a two-way sound. The necrosis that results is accompanied by the minimum of disturbance in the adjacent tissues.

92. **Analysis of Urine in Determining Age of Neonatorum.**—The presence of chlorids in the urine is not indicative of the age nor of the possibility of extra-uterine life. The phosphates, on the other hand, are valuable from this point of view. In 109 analyses of urine from 25 infants it was impossible to detect the phosphates in the urine before two complete days of extra-uterine existence, and the traces were not distinct until the third and fourth days.

94. **Nature of Blood Serum.**—Buffa points out the difference between the behavior of the serum and of the urine, for instance. When ice forms on urine representing merely 12 per cent. of the water contained in it, there is an increase of more than .006 in the density of the urine below. But ice can form on blood serum to a thickness representing 35 per cent. of the total fluid, without altering the density of the fluid below nor of the ice itself. The serum, therefore, does not obey the laws of an ordinary solution. The water and the salts are evidently combined with the proteid molecules.

95. **Phototherapy of Ozena.**—Dionisio reports eight cases all remarkably improved and some radically cured under a course of phototherapy. If the benefit derived proves to be permanent, the results encourage the widespread application of this treatment. He reflected the light into the nose in some cases and in others introduced a small electric lamp with water circulating in its walls, or used a larger electric lamp

placed in the back of the mouth. The transparency of the facial bones and nasal fossæ allowed the penetration of the light. Still another method he found useful was the concentration of a powerful light on a glass tube in the nostril.

96. **Cutaneous Sensibility in Case of Visceral Lesions.**—Tedeschi's research confirms Head's assertions on this subject. He found that the hyperalgesia in appendicitis was most marked in the tenth dorsal zone, while the twelfth dorsal zone was the seat of the maximum of hyperalgesia in case of salpingitis. The painful region extended from a point above the crural arch to about half its length. This difference in the location of the hyperalgesia may serve to differentiate the two affections in dubious cases.

99. **The Nerves of Taste.**—In two cases operated upon by Biondi for neuralgia by the Krauss-Hartley method, Fasola has studied the course of the taste fibers in the tongue; he concludes that the trigeminus has really its own gustatory fibers, which pass to the anterior marginal parts and to the point of the tongue either directly by the lingual branch of this nerve or by passing in the chorda tympani from some more central point, for example, across to the branch of the otic ganglion. Admitting that the chorda contains a part of these gustatory fibers of trigeminus origin does not exclude that they may also contain others coming from elsewhere, for example, by the intermediation of the nerve of Wrisberg and the glosso-pharyngeal. We thus admit in the chorda the existence of fibers of various origin to explain the persistence in the first days after the operation of a certain taste sensibility and the return of complete, or certainly very conspicuous, sensibility at a later period. These conclusions, he remarks, agree in part with the views of Schiff, but not absolutely.

100. **Infantilism from Pellagra.**—From a study of his case Agostini concludes: 1. That intoxication by the poisoning of diseased maize in the parents, especially in the mother during pregnancy, can produce in children a condition of precocious exhaustion of vitality with degenerative characteristics and retardation of organic development. 2. That in these hereditary pellagra cases we find a high percentage of mortality, a predominance of degeneracy characteristics, especially of cranial anomalies, and quite usually arrest and delay of the development of the body to a point of true dystrophic and myxedematous infantilism and the extinction of procreative power. 3. That the thyroid disturbances found in the cases described of hereditary pellagrous arrest of development are frequently met with in pellagra patients, showing the ready morbidity of this gland in the presence of the specific poisoning and explain the dystrophic or myxedematous phenomena and tend to the aggravation of the symptoms of pellagra intoxication.

102. **Study of Alimentary Infection.**—Galeotti tabulates the various cases of established infection from food which have been published, with details of symptoms, etc. It is evident that putrid meat and infected mollusks are capable under certain circumstances of causing infection which develops with ordinary gastro-intestinal symptoms and signs of general intoxication. The micro-organisms causing the infection may be saprophytes acquiring pathogenic power from some modification in their host or from the lack of resistance of the person who ingests them. He then describes a serious epidemic disease traced to a certain kind of fish, ordinarily eaten with impunity. He was able to isolate a toxic bacterium from these fishes and reproduce the symptoms in animals. The tests were renewed a year later under the same conditions except that the epidemic of the year before had not been repeated. He succeeded in isolating again the same bacterium, but at this time it had no pathogenic power and the tests on animals were invariably negative.

103. **Experimental Research on Intestinal Peristalsis.**—Fasola concludes from the extensive research described that true antiperistaltic contractions never occur, either in physiologic or in pathologic conditions.

110. **Treatment of Tuberculosis with Sulphid of Allyl.**—Guerra has used sulphid of allyl—better known as oil of garlic—in 17 cases of tuberculosis, and is convinced that it possesses marked antitoxic properties while it is a powerful tonic and stimulant. All of his patients were clinically cured. He followed the directions given by Sejournet of Rheims with slight modifications, injecting 1 c.c. of the following solution: 1 gm. each of sulphid of allyl and sulphuric ether; 20 gm. of eucalyptol and 100 gm. of olive oil. The injections were made under the skin of the back or leg, every fourth day, increasing each time by .5 c.c. until the dose of 3 c.c. was reached and then suspending treatment for a week or two. The sulphid of allyl is eliminated by the lungs; to disguise the garlic odor he has the patients rinse the mouth with an aromatic solution before and after eating and on retiring. He announced from his experience that while it is not a specific, yet this treatment is the most rational of all modern methods on account of its influence on the general health, the appetite and digestion.

111. **Treatment of Convulsions.**—Lamicq distinguishes between convulsions due to some affection of the nerve centers and those due to an intoxication of the organism. The latter should be treated by hastening the elimination or neutralizing the toxic substance. The convulsion itself does not require direct treatment unless it assumes a dangerous phase. Ordinarily the convulsion occasions an abundant elimination of the toxin causing the disturbance, and is thus directly beneficial and should not be combated. The hypo-algesia or anesthesia noted before the convulsions disappears afterward in many cases. Paralysis, uncontrollable vomiting or any persisting hysteric trouble is liable to vanish during the course of the convulsive attack and sometimes permanently. Gilles de la Tourette has even suggested the advisability of inducing convulsions by compression of a hysterogenic zone or other measure, as a last resort in treatment of rebellious hysteric manifestations.

123. **Absorption of Iron.**—Poulsson recommends the standard liquor ferri albuminati of the Norwegian pharmocopeia as the best means of administering iron. It is inexpensive and contains the least alcohol of any of the usual preparations of iron. The latter fact commends it particularly for children.

124. **Nitropropiol or Indigo Test for Sugar in Urine.**—Thesen places a high value on Hoppe Seyler's indigo reaction as a method of determining the presence of sugar in urine. It is based on the fact that indigo is formed from ortho-nitrophenyl-propiol acid by the reduction of sugar in an alkaline solution. The test is simple, inexpensive and deserves more general adoption. It has been much simplified by the recent improved nitro-propiol tablets which have been put on the market for the purpose.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume VI. Gynecology, Edited by Emilius C. Dudley, A.M., M.D., Professor of Gynecology, Northwestern University Medical School. With the Collaboration of William Healy, A.B., M.D. March, 1902. Cloth. Pp. 212. Price, $1.25. Chicago: The Year Book Publishers.

SOME THOUGHTS ON THE PRINCIPLES OF LOCAL TREATMENT IN DISEASES OF THE UPPER AIR PASSAGES, Being Two Lectures at the Medical Graduates' College and Polyclinic, on October 2 and 9, 1901. With an Appendix Consisting of Two Letters Published on November 23, 1901, and on January 11, 1902, in the British Medical Journal. By Sir Felix Semon, M.D., F.R.C.P., Physician Extraordinary to H. M. the King. Cloth. Pp. 130. Price, $1.00. London: Macmillan & Co., Ltd. 1902.

GENITO-URINARY DISEASES AND SYPHILIS. For Students and Practitioners. By Henry H. Morton, M.D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital. Illustrated with Half-tones and Full-page Color Plates. Pp. xii-372. Price, extra cloth, $3.00 net. Philadelphia: F. A. Davis Company, Publishers.

TRANSACTIONS OF THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY AND THE CARE OF EPILEPTICS, at the First Annual Meet-

ing, Held in Washington, D. C., May 14 and 15, 1901. Edited by William P. Letchworth, LL.D. Paper. Pp. 221. Price, $1.00. New York: C. E. Brinkworth. 1901.

THE UNITED STATES ARMY, GENERAL HOSPITAL, Presidio, California, During the Years 1900 and 1901. Reports of its Commanding Officer, Lieut.-Col. Alfred C. Girard, Deputy Surgeon-General, U. S. A., to Brigadier General Geo. M. Sternberg, Surgeon-General, U. S. A. Paper. Pp. 110.

MANUAL OF CHILDBED NURSING, WITH NOTES ON INFANT FEEDING. By Charles Jewett, A.M., M.D., Sc.D., Professor of Obstetrics and Diseases of Women in Long Island College Hospital. Fifth Edition, Revised and Enlarged. Cloth. Pp. 84. Price, $0.80. New York: E. B. Treat & Co. 1902.

THE CAUSES OF DEATH AMONG THE ASSURED IN THE SCOTTISH WIDOWS' FUND AND LIFE ASSURANCE SOCIETY. From 1874 to 1894 inclusive. Reported by Claud Muirhead, M.D., F.R.C.P.E., Medical Officer of the Society. Cloth. Pp. 81. Edinburgh: R. & R. Clark, Ltd. 1902.

ANOMALIES AND DISEASES OF THE EYE. By Flavel B. Tiffany, A.M., M.D., Professor of Ophthalmology and Otology in the University Medical College of Kansas City, Mo. Cloth. Pp. 619. Price, $3.00. Kansas City, Mo.: Hudson-Kimberly Publishing Co. 1902.

EXPERIMENTELLE UNTERSUCHUNG UND MENSCHEN ueber den Einfluss der Muskelarbeit auf den Stoffverbrauch und die Bedeutung der einzelnen Nährstoffe als Quelle der Muskelkraft. Von Prof. H. Newton Heineman, M.D., aus New York. Cloth. Pp. 36. 1901.

MANUAL OF ANTENATAL PATHOLOGY AND HYGIENE. THE FOETUS. By J. W. Ballantyne, M.D., F.R.C.P.E., F.R.S. Edin., Lecturer on Midwifery and Gynecology, Medical College for Women, Edinburgh. Cloth. Pp. 527. Edinburgh: William Green & Sons. 1902.

TRANSACTIONS OF THE KENTUCKY STATE MEDICAL SOCIETY. New Series. Volume IX. Forty-sixth Annual Meeting, Held at Louisville, May 22, 23 and 24, 1901. Cloth. Pp. 272. Louisville: John P. Morton & Co. 1902.

INTRODUCTION TO MATERIA MEDICA AND PRESCRIPTION WRITING. By O. T. Osborne, M.A., M.D., Professor of Materia Medica and Therapeutics at Yale Medical School. Cloth. Pp. 64. New York: Stettiner Bros. 1900.

WHAT A WOMAN OF FORTY-FIVE OUGHT TO KNOW. By Mrs. Emma F. Angell Drake, M.D., Graduate of Boston University Medical College. Cloth. Pp. 211. Price, $1.00. Philadelphia: The Vir Publishing Co.

REPORT OF MAJOR W. C. GORGAS, Chief Sanitary Officer of the City of Havana, Report of the Chief Surgeon of the Department, Report of the Superintendent, Department of Charities. Paper. Volume IV.

TEXT-BOOK OF ANATOMY AND PHYSIOLOGY FOR NURSES. Compiled by Diana Clifford Kimber, Graduate of Bellevue Training School. Cloth. Pp. 275. Price, $2.50. New York: The Macmillan Co. 1902.

TRANSACTIONS OF THE IOWA STATE MEDICAL SOCIETY. Volume XIV. Fifteenth Annual Session, 1901. Cloth. Pp. 478. Cedar Rapids, Iowa: Record Printing Company. 1901.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., April 3 to 9, 1902, inclusive:

Julien R. Bernheim, contract dental surgeon, now at San Francisco, Cal., will report for transportation to Manila, P. I., for duty in the Division of the Philippines.

William N. Bispham, lieutenant and asst.-surgeon, U. S. A., leave of absence for one month granted, to take effect on his arrival in the United States.

James B. Ferguson, contract surgeon, former orders so amended as to require him to proceed to Boise Barracks, Idaho, for duty at that post.

Edward T. Gibson, captain and asst.-surgeon, Vols., recently appointed and now at San Francisco, Cal., to report for temporary duty in the Department of California, and for assignment on a transport when a vacancy occurs.

Willis S. Home, contract surgeon, former orders revoked; he is relieved from further duty in the Division of the Philippines and assigned to temporary duty in the Department of California.

Paul C. Hutton, lieutenant and asst.-surgeon, U. S. A., leave of absence extended ten days.

Frank J. Ives, major and surgeon, U. S. A., member of a board at Fort Sheridan, Ill., to examine officers of the Army for promotion.

James P. Kimball, colonel, assistant surgeon-general, retired from active duty on account of disability incident to service, to date from April 7, 1902.

Arthur M. Line, lieutenant and asst.-surgeon, U. S. A., former orders amended so as to direct him to report for duty at Fort Riley, Kan.

James E. Meade, captain and asst.-surgeon, Vols., recently appointed and now at San Francisco, Cal., to proceed to Manila, P. I., for assignment in the Division of the Philippines.

George H. Richardson, lieutenant and asst.-surgeon, U. S. A., member of a board at Fort Grant, Ariz., to examine officers of the Army for promotion.

Charles F. Smith, contract surgeon, member of a board at Fort Sheridan, Ill., to examine officers of the Army for promotion.

William J. S. Stewart, captain and asst.-surgeon, Vols., from temporary duty at Fort Slocum, N. Y., to San Francisco, Cal., for temporary duty in the Department of California and assignment to a transport when a vacancy occurs.

Paul F. Straub, captain and asst.-surgeon, U. S. A., member of a board at Omaha, Neb., to examine officers of the Army for promotion.

Charles W. Thorp, contract surgeon, leave of absence extended for one month.

Hugo A. Wahl, contract surgeon, leave of absence for two months granted, with permission to go beyond the sea.

Charles K. Winne, lieut.-col. and deputy surgeon-general, member of a board at Omaha, Neb., to examine officers of the Army for promotion.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending April 12, 1902:

Surgeon T. A. Berryhill, granted sick leave for six months.

Medical Inspector E. Kerchner, retired, commissioned medical inspector on the retired list from April 2, 1902.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended April 10, 1902:

Surgeon H. W. Austin, to proceed to the Delaware Breakwater and Reedy Island Quarantine Stations as inspector of unserviceable property.

Surgeon A. H. Glennan, to report at Washington, D. C., for special temporary duty.

A. A. Surgeon S. H. Hodgson, granted extension of leave of absence for ten days from March 30.

A. A. Surgeon J. M. Jackson, granted leave of absence for three days from April 9.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended April 11, 1902:

SMALLPOX—UNITED STATES.

California: San Francisco, March 22-29, 7 cases.
Colorado: Denver, March 22-29, 4 cases.
Illinois: Chicago, March 29-April 5, 9 cases; Danville, March 29-April 5, 3 cases; Peoria, March 1-31, 17 cases.
Indiana: Evansville, March 29-April 5, 4 cases; Indianapolis, March 29-April 5, 18 cases; Terre Haute, March 22-April 5, 1 case.
Iowa: Ottumwa, March 1-29, 32 cases.
Kentucky: Covington, March 30-April 6, 18 cases.
Louisiana: Shreveport, March 29-April 5, 14 cases.
Maryland: Baltimore, March 29-April 5, 2 cases, 1 death.
Massachusetts: Boston, March 29-April 5, 23 cases; Brockton, March 29-April 5, 2 cases; Cambridge, March 29-April 5, 3 cases, 1 death; Everett, March 29-April 5, 5 cases; Holyoke, March 15-April 5, 11 cases; Melrose, March 5-April 5, 2 cases, 1 death; New Bedford, March 29-April 5, 1 case; Newton, March 29-April 5, 3 cases; Quincy, March 29-April 5, 3 cases; Somerville, March 29-April 5, 1 case.
Michigan: Detroit, March 29-April 5, 15 cases; Ludington, March 29-April 5, 9 cases.
Nebraska: Omaha, March 29-April 5, 24 cases.
New Jersey: Camden, March 29-April 5, 4 cases; Elizabeth, March 22-29, 1 case; Newark, March 29-April 5, 20 cases, 3 deaths.
New York: New York, March 29-April 5, 75 cases, 20 deaths.
North Carolina: Charlotte, March 1-31, 30 cases, 1 death.
Ohio: Cincinnati, March 28-April 4, 13 cases, 1 death.
Pennsylvania: March 29-April 5, Altoona, 1 case; Johnstown, 1 case; Philadelphia, 26 cases, 6 deaths.
Rhode Island: Providence, March 29-April 5, 2 cases.
South Dakota: Sioux Falls, March 29-April 5, 1 case.
Tennessee: March 29-April 5, Memphis, 15 cases; Nashville, 1 case.
Utah: Salt Lake City, March 29-April 5, 1 case.
Virginia: Roanoke, March 1-31, 32 cases, 1 death.
Washington: Tacoma, March 23-30, 7 cases.
West Virginia: Wheeling, March 29-April 5, 1 case.
Wisconsin: Green Bay, March 28-April 6, 2 cases.

SMALLPOX—INSULAR.

Porto Rico: Ponce, March 15-22, 6 cases.

SMALLPOX—FOREIGN.

Belgium: Antwerp, March 15-22, 11 cases, 6 deaths.
Brazil: Rio de Janiero, Feb. 16-March 16, 21 deaths.
Canada: Winnipeg, March 22-29, 1 case.
China: Hongkong, Feb. 16-March 1, 8 cases, 8 deaths.
Colombia: Cartagena, Feb. 15-22, 1 death.
France: Paris, March 15-22, 2 deaths.
Great Britain: Glasgow, March 22-28, 10 cases, 6 deaths; London, March 15-22, 449 cases, 53 deaths; North Shields, to March 15, 21 cases, 2 deaths; South Shields, March 15, 8 cases.
Italy: Palermo, March 8-15, 9 cases, 2 deaths.
Mexico: March 16-23, 3 cases, 2 deaths; Vera Cruz, March 15-29, 2 cases.
Russia: Moscow, March 8-15, 2 cases, 2 deaths; Odessa, March 15-22, 3 cases, 2 deaths.
Uruguay: Montevideo, Feb. 22-28, 71 cases, 5 deaths.

YELLOW FEVER.

Brazil: Rio de Janiero, Feb. 16-March 16, 128 deaths.
French Guiana: Cayenne, March 27, present.
Mexico: Vera Cruz, March 15-29, 6 cases, 3 deaths.

CHOLERA.

China: Shekiung, March 31, sporadic; Tung Kun, March 31, sporadic.
Straits Settlements: Singapore, Feb. 15-22, 2 deaths.

PLAGUE.

Brazil: Pernambuco, April 4, declared infected; Rio de Janeiro, Feb. 16-March 16, 1 death.
China: Hongkong, Feb. 15-March 1, 1 case, 1 death; Tsang Shing, March 31, 20 deaths.
Japan: Nagasaki, March 12, 1 case on S. S. *Taichu Maru*, from Formosa.